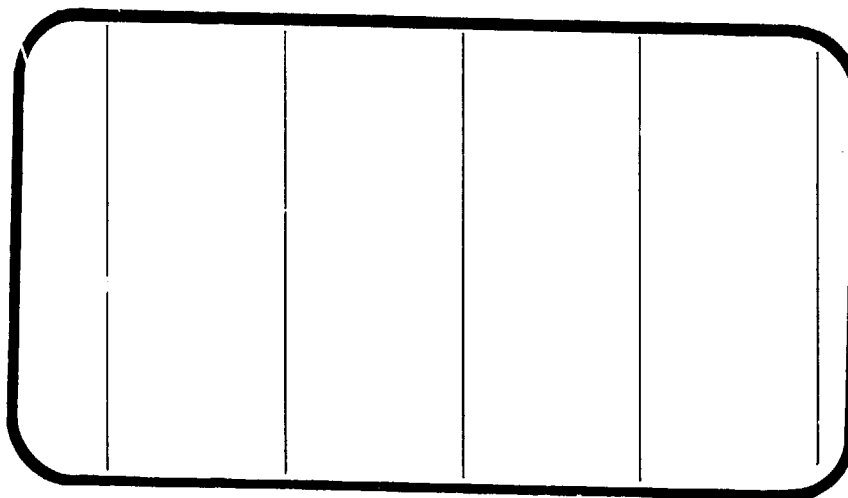




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(NASA-CR-134444) AIRLOADS INVESTIGATION OF
AN 0.030-SCALE MODEL OF THE SPACE SHUTTLE
VEHICLE 140A/B LAUNCH CONFIGURATION (MODEL
47-JTS) IN THE ARC 11 FOOT UNITARY PLAN WIND
TUNNEL FOR MACH RANGE 0.6 TO 1.4 (IA11A),

N75-19337

G3/18

Unclass
14580

SPACE SHUTTLE

AEROTHERMODYNAMIC DATA REPORT

JOHNSON SPACE CENTER

HOUSTON, TEXAS

DATA MANAGEMENT services

SPACE DIVISION



CHRYSLER
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VOLUME 2 OF 11

AIRLOADS INVESTIGATION OF AN 0.030-SCALE MODEL
OF THE SPACE SHUTTLE VEHICLE
140A/B LAUNCH CONFIGURATION (MODEL 47-OTS)
IN THE ARC 11-FOOT UNITARY
PLAN WIND TUNNEL FOR MACH RANGE 0.6 TO 1.4 (IA14A)

by

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Prepared under NASA Contract Number NAS9-13247

by

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for

Engineering Analysis Division

Johnson Space Center
National Aeronautics and Space Administration
Houston, Texas

WIND TUNNEL SPECIFICS:

Test Number: ARC 11-716
NASA Series No.: IA14A
Model Number: 47-OTS
Test Dates: 4 through 13 September 1973

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AIRLOADS INVESTIGATION OF AN 0.030-SCALE MODEL
OF THE SPACE SHUTTLE VEHICLE
140A/B LAUNCH CONFIGURATION (MODEL 47-OTS)
IN THE ARC 11-FOOT UNITARY
PLAN WIND TUNNEL FOR MACH RANGE 0.6 TO 1.4 (IA14A)
VOLUME 2

By R. L. Gillins, Rockwell International Space Division

ABSTRACT

This report presents results of tests conducted on an 0.030-scale launch configuration model of the Space Shuttle Vehicle 140A/B in the NASA/ARC 11-Foot Unitary Plan Wind Tunnel. Aerodynamic loads data were obtained at Mach numbers from 0.6 to 1.4.

Surface pressure distributions were obtained simultaneously with six-component stability and control force data on the complete launch configuration. The configuration consisted of the orbiter, an external tank, two solid rocket boosters, and associated intercomponent attach hardware. Angles of attack and sideslip from -10 degrees to +10 degrees were investigated. The tests, designated IA14A, were conducted from 4 September 1973 through 13 September 1973.

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PLOTTED COEFFICIENT SCHEDULE:

- | | |
|-------------------|--------------------|
| A) CP versus X/LB | D) CP versus X/CW |
| B) CP versus X/LT | E) CP versus X/CV |
| C) CP versus X/LS | F) CP versus BETA0 |

INDEX OF DATA FIGURES (Continued)

The plotted pressure data, presented as a function of angle of side-slip, angle of attack, and geometric parameters, is representative of the tabulated data presented in Volumes 3 through 11. A summary of the pressure data plotted is given below.

<u>DATASET PLOTTED</u>	<u>COMPONENT</u>	<u>MACH</u>	<u>PHI SCHED.</u>	<u>BETA SCHED.</u>	<u>ALPHA SCHED.</u>	<u>GEOMETRIC PARAMETER SCHEDULES</u>
RB1B33	ORB. FUSELAGE	1.25	(A)	(A)	(A)	
RB1B34	ORB. FUSELAGE	0.6	(A)	(B)	(B)	
RB1B38	ORB. FUSELAGE	1.05	(A)	(B)	(B)	
RB1B40	ORB. FUSELAGE	1.4	(A)	(B)	(B)	
RB1T33	EXTERNAL TANK	1.25	(B)	(A)	(A)	
RB1T34	EXTERNAL TANK	0.6	(B)	(B)	(B)	
RB1T38	EXTERNAL TANK	1.05	(B)	(B)	(B)	
RB1T40	EXTERNAL TANK	1.4	(B)	(B)	(B)	
RB1S33	SRM BOOSTER	1.25	(C)	(A)	(A)	
RB1S34	SRM BOOSTER	0.6	(C)	(B)	(B)	
RB1S38	SRM BOOSTER	1.05	(C)	(B)	(B)	
RB1S40	SRM BOOSTER	1.4	(C)	(B)	(B)	
RB1U33	UPPER WING SURF.	1.25	-	(A)	(A)	Y/BW (A)
RB1L33	LOWER WING SURF.					
RB1U34	UPPER WING SURF.	0.6	-	(C)	(C)	Y/BW (A)
RB1L34	LOWER WING SURF.					
RB1U38	UPPER WING SURF.	1.05	-	(C)	(C)	Y/BW (A)
RB1L38	LOWER WING SURF.					
RB1U40	UPPER WING SURF.	1.4	-	(C)	(C)	Y/BW (A)
RB1L40	LOWER WING SURF.					
RB1V33	VERT. TAIL LT. SURF.	1.25	-	(A)	(A)	Z/BV (A)
RB1R33	VERT. TAIL RT. SURF.					
RB1V34	VERT. TAIL LT. SURF.	0.6	-	(B)	(B)	Z/BV (A)
RB1R34	VERT. TAIL RT. SURF.					
RB1V38	VERT. TAIL LT. SURF.	1.05	-	(B)	(B)	Z/BV (A)
RB1R38	VERT. TAIL RT. SURF.					

INDEX OF DATA FIGURES (Continued)

DATASET PLOTTED	COMPONENT	MACH	PHI SCHED.	BETA SCHED.	ALPHA SCHED.	GEOMETRIC PARAMETER SCHEDULES
RB1V40	VERT. TAIL LT. SURF.	1.4	-	(B)	(B)	Z/BV (A)
RB1R40	VERT. TAIL RT. SURF.					
RB1C33	ORBITER BASE	1.25	(D)	(D)	(A)	TAP NO. (A)
RB1E33	OMS NOZZLE	1.25	(E)	(D)	(A)	X/LNM (A)
RB1X33	SRM BASE	1.25	(C)	(D)	(A)	X/LS (A)
RB1Y33	E.T. BASE	1.25	(D)	(D)	(A)	TAP NO. (B)
RB1133	ORB. ATTACH POINTS	1.25	-	(D)	(A)	X/BW, X/LB SEE PLOTS
RB1233	E.T. ATTACH POINTS	1.25	SEE PLOTS	(D)	(A)	SEE PLOTS
RB1333	E.T. BASE RAKE	1.25	(F)	(D)	(A)	TAP NO. (C)

PARAMETER SCHEDULES

ALPHA

SCHEDULES (A) -8, -4, 0, 4, 8
(B) -8, 0, 8
(C) -8, 0, 4, 8

BETA

(A) -8, -4, -2, 0, 4, 8
(B) -8, 0, 4, 8
(C) -8, 0, 8
(D) 0

PHI

(A) 0, 20, 40, 55, 70, 90, 120, 135, 150, 165, 180
(B) 0, 30, 60, 90, 120, 135, 150, 165, 180, 270
(C) 0, 45, 90, 135, 180, 225, 270, 315
(D) 0
(E) 135, 180, 225
(F) 180

INDEX OF DATA FIGURES (Concluded)

Y/BW	(A)	.299, .364, .427, .534, .673, .780, .887
Z/BV	(A)	.158, .316, .600, .840, .925
X/LNM	(A)	.2, .4
X/LS	(A)	.948, .979, .993
X/LB	(A)	.126, .133, .811, .819, .827, .835, .850, .858
TAP NO.	(A)	1, 2, 3, 4, 5
	(B)	501, 502, 801, 802, 803, 804
	(C)	790, 789, 782, 787

INTRODUCTION

The 0.030-scale aero loads Space Shuttle Model was tested in the ARC Unitary Plan Wind Tunnels as follows:

IA14A	4 thru 13 Sept. 1973
IA14B	17 thru 19 Sept. 1973
OA22A	13 thru 14 Sept. 1973
OA22B	19 thru 20 Sept. 1973

For tests IA14B, OA22A, and OA22B, see reference 34, 35, and 36, respectively.

The testing was conducted in the 11-foot and the 9- by 7-foot tunnels of the ARC Unitary Plan Wind Tunnels. The IA14A/B tests were for the launch configurations at Mach numbers from 0.6 to 2.2. The OA22A/B tests were for the orbiter alone configuration at Mach numbers from 0.6 to 2.2. The effects of control surface deflections were also investigated in tests OA22A/B.

This report for test IA14A consists of one volume of force data and ten volumes of pressure data for a total of eleven volumes arrayed in the following manner:

Volume No.	Contents	Page
1.	IA14A force data	
2.	IA14A plotted pressure data	
3.	IA14A tabulated pressure data	
	(a) Orbiter fuselage (B)	1-725
	(b) Orbiter base (C)	726-918

Volume No.	Contents	Page
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	(a) Left vertical tail surface (V)	3298-3603
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8.	IA14A tabulated pressure data	
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9.	IA14A tabulated pressure data	
	(a) External tank (T)	4445-5031
	(b) SRM nozzle (X)	5032-5161
10.	IA14A tabulated pressure data	
	(a) External tank base & SRM booster base (Y)	5162-5354
	(b) Orbiter attach points (1)	5355-5941
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	(b) External tank base rake (3)	6314-6412

NOMENCLATURE General

<u>SYMBOL</u>	<u>SADSCAC SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_1 - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2 , psf
q	$Q(NSM)$ $Q(PSF)$	dynamic pressure; $1/2\rho V^2$, N/m^2 , psf
Re/L	Re/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3 , slugs/ft ³

Reference & C.G. Definitions

A_b		base area; m^2 , ft^2
b	BREF	reference span; m, ft
C.G.		center of gravity
\bar{c}		reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m^2 , ft^2
	MREF	moment reference point
	XMREF	moment reference point on X axis
	YMREF	moment reference point on Y axis
	ZMREF	moment reference point on Z axis

SUBSCRIPTS

b	base
l	local
s	static conditions
t	total conditions
∞	free stream

NOMENCLATURE (Continued)

Body-Axis System

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(p_b - p_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$

Stability-Axis System

C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS l_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS b}$
C_l	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS b}$
L/D	L/D	lift-to-drag ratio; C_L/C_D

NOMENCLATURE (Continued)
Additions To Standard List

<u>Symbol</u>	<u>SADSAC Symbol</u>	<u>Definition</u>
$A_{()}$		model base area, subscript is base orifice number and identifies location
C_{A_b}	CAB	model base axial-force coefficient
$C_{p_{()}}$		model static pressure coefficient, subscript is orifice number, $[p_{()} - p_{\infty}]/q$
C_{AU}	CA	axial-force coefficient, unadjusted
C_{AF}	CAF	forebody axial-force coefficient, C_{AU} adjusted for base terms
ET		external tank
IV		integrated vehicle, consists of orbiter, external tank, and two solid rocket motors
l_{REF}	LREF	reference length, inches
MRC		moment reference center
OMS		orbital maneuvering system
δ_e	ELEVON	elevon, surface deflection angle, positive deflection trailing edge down, degrees
δ_f	BDFLAP	orbiter body flap deflection angle, positive deflection angle is trailing edge down, degrees
δ_R	RUDDER	rudder, surface deflection angle, positive deflection trailing edge to the left, degrees
δ_{SB}	SPDBRK	speed brake deflection angle, left split rudder trailing edge left and right split rudder trailing edge right, $\delta_{SB} = (\delta_{RL} + \delta_{RR})/2$, positive deflection, degrees
i_0	ORBINC	incidence angle between the orbiter and external tank, $i_0 = \alpha_0 - \alpha_T$, degrees

NOMENCLATURE (Continued)

β_T	BETAT	angle of sideslip of external tank, degrees
α_T	ALPHAT	angle of attack of external tank, degrees
l_B	LB	length of orbiter body, in
l_T	LT	length of external tank, in
l_S	LS	length of SRM booster, in
l_{NM}	LNМ	length of OMS nozzle, positive direction forward of exit plane, in
l_{NP}	LNP	length of MPS nozzle, positive direction forward of exit plane, in
$b/2$	BW	wing semi-span, in
b_v	BV	vertical tail span, in
x	X	distance from component nose, in
y	Y	lateral distance from centerline, in
z	Z	vertical distance measured from W.L. 500 (vertical tail reference root chord), in
c_w	CW	local wing chord, in
c_v	CV	local vertical tail chord, in
x/l_B	X/LB	longitudinal position/orbiter body length
x/l_T	X/LT	longitudinal position/external tank length
x/l_S	X/LS	longitudinal position/booster length
x/l_{NM}	X/LNM	longitudinal position/OMS nozzle length

NOMENCLATURE (Concluded)

x/l_{NP}	X/LNP	longitudinal position/MPS nozzle length
x/c_w	X/CW	local chordwise position/local wing chord length
x/c_v	X/CV	local chordwise position/local vertical tail chord length.
η	Y/BW	local spanwise position/wing semi-span
η_v	Z/BV	local spanwise position/vertical tail span
x_{CP}/l	XCP/L	center of pressure distance from MRC, expressed as a fraction of body length
β_0	BETA0	angle of sideslip of orbiter
α_0	ALPHA0	angle of attack of orbiter

CONFIGURATIONS INVESTIGATED

The 0.030-scale Aero Loads Model, 47-OTS, was configured after the Shuttle Vehicle MCR 0200 Baseline R1, as defined in drawing number VL70-000088B. The orbiter configuration was a combination of the VL70-000140A orbiter and a VL70-000140B wing and midbody, from which the 140A/B designation was derived. The basic launch configuration consisted of the orbiter, an external tank with simulated fuel and vent lines, and two solid rocket boosters, designated O_1 T_{12} S_{12} N_{25} .

Three launch configurations were tested. One was the basic configuration described above mounted on a dual balance and sting arrangement, illustrated in figure 2d. A second contained attach hardware, designated AT_{10} , mating the orbiter with the external tank and mounted on a single sting and balance in the orbiter, illustrated in figure 2b. The third utilized a similar attach hardware configuration, designated AT_{11} , which was attached to the orbiter but not to the external tank and was mounted on the same dual sting and balance arrangement as the basic configuration (figure 2c). In all three configurations, the SRB-to-ET attach hardware was simulated at the forward attach location but not at the aft attach location. Model and component general arrangements are shown in figures 2e through 2o.

Component	Description
O_1	140A/B orbiter minus the main propulsion system nozzles
T_{12}	324-inch diameter external tank with ogive nose and external fuel and vent lines
S_{12}	142.3-inch diameter solid rocket boosters

N_{25}	Nozzles for S_{12} boosters
AT_{10}	Orbiter-to-ET attach hardware, fixed to both vehicles
AT_{11}	Orbiter-to-ET attach hardware, fixed to orbiter only
LV	$O_1 T_{12} S_{12} N_{25}$
LVA	$O_1 T_{12} S_{12} N_{25} AT_{10}$
LVA ^P	$O_1 T_{12} S_{12} N_{25} AT_{11}$

The orbiter O_1 , consisted of the following components:

$B_{26} C_9 F_8 M_7 N_{28} V_8 R_5 W_{116} E_{26}$.

B_{26}	Double delta wing fuselage, 140A/B
C_9	Canopy, 140A
F_8	Body flap, 140A
M_7	OMS pods, 140A
N_{28}	OMS nozzles, 140A
V_8	Vertical tail, 140A
R_5	Rudder, 140A
W_{116}	Double delta wing, 140B
E_{26}	Elevons, 140B

Parametric investigations were limited to angles of attack and side-slip with all orbiter control surfaces at 0° deflection.

INSTRUMENTATION DESCRIPTION

The left side of the orbiter and the external tank and the left hand SRB were extensively instrumented with pressure orifices for measurement of surface static pressure distributions. Additionally, there were clusters of orifices around inter-component attach structure locations on the right hand side of the orbiter and external tank. The orbiter contained 471 operational orifices, of which 83 were clustered around attach structure. The external tank contained 270 operational orifices, of which 127 were clustered around attach structure. The SRB contained 124 operational orifices. A three-tube total pressure rake was installed in the opening between the orbiter and external tank. Tables and sketches defining orifice locations are included in this report. All model pressures were measured by model mounted Scanivalve, Inc., S-type scanivalve modules - twelve in the orbiter, seven in the external tank, and five in the SRB.

Force instrumentation consisted of a six-component internal force balance in both the orbiter and external tank for the LV and LVAP configurations, and a single six-component internal force balance in the orbiter for the attached LVA configuration.

TEST FACILITY DESCRIPTION

The tests were conducted in the Ames 11- by 11-Foot Transonic Wind Tunnel which is a variable density, closed return, continuous flow type. This tunnel has an adjustable nozzle (two flexible walls) and a slotted test section to permit transonic testing over a Mach number range continuously variable from 0.4 to 1.4.

DATA REDUCTION

Data were reduced to coefficient form about body axes using the following reference constants:

$S_{REF} = 2.421 \text{ ft}^2$	reference area for force and moment coefficients
$l_{REF} = 38.709 \text{ in}$	reference length for moment coefficients
$A_1 = 0.07670 \text{ ft}^2$	Orbiter sting cavity
$A_2 = 0.21340 \text{ ft}^2$	Orbiter heat shield base
$A_3 = 0.08560 \text{ ft}^2$	Orbiter OMS base (2)
$A_4 = (\text{see table below})$	Orbiter speed brake base
$A_{501} = 0.07266 \text{ ft}^2$	Tank sting cavity
$A_{502} = 0.44264 \text{ ft}^2$	Tank base
$A_{801} = 0.19600 \text{ ft}^2$	SRM nozzle base (2)
$A_{802} = 0.16590 \text{ ft}^2$	SRM skirt base (2)
$\delta_{SB} =$	$A_4 =$
0 deg	0 ft ²
14.92	0.02327
24.92	0.03866
34.92	0.05370
54.92	0.08252
84.92	0.12083
$X_{MRP} = 0 \text{ in}$	
$Y_{MRP} = 0 \text{ in}$	
$Z_{MRP} = 9.99 \text{ in}$	

The incidence angle between the orbiter and the external tank is equal to zero for angle of attack and angle of sideslip. Therefore, the angle of attack, ALPHA, used in the force plots is equal to ALPHA0. Also the angle of sideslip, BETA, used in the force plots is equal to BETA0.

The force and moment data recorded by the orbiter balance for configuration LV and LVAP are identified as RB10XX datasets. Force and moment data recorded by the tank balance for configuration LV and LVAP and by the orbiter balance for LVA (composite) are identified by RB11XX.

The pressure data were recorded for each component. The fourth character in each dataset identifier (i.e. RB1BXX, B for fuselage) represents the individual component. The following list indicates the symbol for each component.

SYMBOL	COMPONENT
B	Orbiter fuselage
C	Orbiter base
E	OMS nozzle
F	Body flap
M	OMS pod outside
L	Lower wing surface
U	Upper wing surface
R	Right vertical tail surface
V	Left vertical tail surface
S	SRM booster
T	External tank
X	SRM nozzle

SYMBOL

COMPONENT

Y

External tank base & SRM booster base

1

Orbiter attach points

2

External tank attach points

3

External tank base rake

REFERENCES

1. Orbiter - Lines and Configuration Control Drawings
2. VL70-000140A, Orbiter Configuration Control Drawing MCR 0200 Baseline
3. VL70-000143A, Lines Control, Vehicle 4 Forward Body - Cabin - Canopy MCR 0200 Baseline
4. VL70-000200, Lines Control, Midbody - Wing - Boot Fairing MCR 200 R3 dated 7-2-73
5. VL70-000145, Lines Control - Aft Body - OMS/RCS Pods, MCR 0200 - R1 baseline
6. VL70-000146A, Lines Control (Vehicle 4) Vertical Tail MCR 0200 Baseline
7. External Oxygen Hydrogen Tank (EOHT) - Lines and Configuration Control Drawings
8. VL78-000041B, External Tank - Configuration Control MCR 0200 Baseline R2
9. VL78-000024A, Structural Assy - External Tank MCR 0200 R2
10. VL78-000031A, Thermal Protection - External Tank, MCR 0200 Baseline
11. Solid Rocket Boosters (SRB) - Lines and Configuration Control Drawings
12. VL77-000036A, SRB Configuration Control MCR 0200 R1
13. VL77-000041, SRB Booster Assy, MCR 0200 R1
14. Integrated Vehicle - Lines and Configuration Control Drawings
15. VL72-000088A, Shuttle Configuration MCR 0200 Baseline R1
16. VL72-000089, SRB-ET-Orbiter Interface Disconnects MCR 0200 Baseline
17. VL72-000075, External Tank to SRB Attach Interface MCR 0074 Baseline
18. Aero Loads Model 47-OTS - Model Fabrication, Assembly and Installation Drawings

19. SS-A00119, Orbiter Assy - .030 Scale Pressure/Loads Model (140A/B Lines)
20. SS-A00120, Assy & Details - EOHT - .030 Scale Pressure/Loads Model (140A Lines)
21. SS-A00121, Orbiter/EOHT Attachments .030 Scale Pressure/Loads Model (140A Lines)
22. SS-A00122, Assy & Details - SKM - .030 Scale Pressure/Loads Model (140A Lines)
23. SS-A00123, Assy & Details - Forebody - .030 Scale Pressure/Loads Model (140A Lines)
24. SS-A00124, Assy & Details - Aft Fuselage - .030 Scale Pressure/Loads Model (140A Lines)
25. SS-A00125, Assy & Details - Wing Splice Plate & Cuff - .030 Scale Pressure/Loads Model (140A Lines)
26. SS-A00126, Assy & Details - Vertical Stabilizer - .030 Scale Pressure/Loads Model (140A Lines)
27. SS-A00127, Ames 11-ft x 11-ft Wind Tunnel Installation - .030 Scale Pressure/Loads Model (140A/B Lines)
28. SS-A00128, Ames 9-ft x 7-ft Wind Tunnel Installation - .030 Scale Pressure/Loads Model (140A/B Lines)
29. SS-A00130, Lines Control - Profile VL70-000140A - .030 Scale Pressure/Loads Model (140A/B Lines)
30. W-1104S Sting - Ames MK II 4" Balance (Male End), Ames MK XX 2.5" Balance
31. W-1105S, Sting - Ames MK II 4" Balance (Male End), RI MK I 2.75 Balance
32. W-1106A, Adapter - Ames MK II, 4" Balance (Male & Female)
33. W-1107A, 13.5" Bent Sting Adapter Ames MK II 4" Balance (Male & Female)

34. (DMS-DR-2129), "Airloads Investigation of an 0.030-Scale Model of the Space Shuttle Vehicle 140A/B Launch Configuration (Model 47-OTS) in the ARC 9- by 7-foot Unitary Plan Wind Tunnel for Mach Range 1.55 and 2.2 (IA14B)"
35. (DMS-DR-2130), "Airloads Investigation of an 0.030-Scale Model of the Space Shuttle Vehicle 140A/B Orbiter Configuration (Model 47-0) in the ARC 11-foot Unitary Plan Wind Tunnel for Mach Range 0.6 and 0.9 (OA22A)"
36. (DMS-DR-2131), "Airloads Investigation of an 0.030-Scale Model of the Space Shuttle Vehicle 140A/B Orbiter Configuration (Model 47-0) in the ARC 9- by 7-foot Unitary Plan Wind Tunnel for Mach Range 1.55 and 2.2 (OA22B)"

TABLE I.

TEST : <u>IA-14A</u>		DATE : <u>9-13-73</u>	
TEST CONDITIONS			
MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq. ft.)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.60	4.0×10^6	480	120
0.75	3.75×10^6	540	120
0.85	3.5×10^6	550	120
0.90	3.5×10^6	580	120
0.95	3.25×10^6	610	120
0.975	3.0×10^6	530	120
1.00	3.0×10^6	535	120
1.025	3.0×10^6	540	120
1.05	3.0×10^6	545	120
1.10	3.0×10^6	550	120
1.15	3.0×10^6	575	120
1.25	2.75×10^6	540	120
1.40	2.75×10^6	570	120

BALANCE UTILIZED: LVA: 2.5-in MK XX (ORBITER)
LVAP: 2.5-in MK XX (ORB.), 2.75-in MK I (ET)

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
	MK XX MK I	MK XX MK I	
NF	6000 7500		
SF	3000 3750	0.2% 0.2%	
AF	500 700	0.2% 0.2%	
PM			
RM	4000 4000	0.2% 0.2%	
YM			

COMMENTS: Test conditions for LVA and LVAP model configurations

TABLE I. - Concluded.

TEST : 1A-14A		DATE : 9-13-73	
TEST CONDITIONS			
MACH NUMBER	REYNOLDS NUMBER (per unit length)	DYNAMIC PRESSURE (pounds/sq. ft)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.60	4.0×10^6	480	120
0.75	4.25×10^6	610	120
0.85	4.5×10^6	710	120
0.90	4.5×10^6	750	120
0.95	4.5×10^6	780	120
0.975	4.25×10^6	750	120
1.05	4.25×10^6	790	120
1.10	4.0×10^6	760	120
1.15	3.75×10^6	720	120
1.25	2.75×10^6	735	120
1.40	3.0×10^6	620	120

BALANCE UTILIZED:	2.5-in MK XX (ORB.), 2.75-in MK I (ET)		
	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
	MK XX MK I	MK XX MK I	
NF	6000 7500	0.2% 0.2%	_____
SF	3000 3750	0.2% 0.2%	_____
AF	600 700	0.2% 0.2%	_____
PC	_____	_____	_____
RM	4000 4000	0.2% 0.2%	_____
YM	_____	_____	_____

COMMENTS: Test conditions for LV model config.

TABLE II

TEST: IA14A										DATE: 13 Sept 1973										
DATA SET/RUN NUMBER COLLATION SUMMARY																				
DATA SET IDENTIFIER	CONFIGURATION	SCHD.	CONTROL DEFLECTION			NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)													
			α	β	δe		δr	δs	0.9	0.925	1.1	1.25								
KB1 x 17	Q1+T12+S12+N25+AT11	B	0	0	0		40	93	92	89										
18	↓ +AT11	0 B	T	T	T		41	94	91	90										
24	Q1+T12+S12+N25+AT10	Z					8*													
25		-8					9*													
26		-6	↓				10*													
27		-4-10					11*													
28		0 Y									38									
29		-10 0									39*									
30	Q1+T12+S12+N25+AT11	0 0	↓	↓	↓						D/62									

TABLE II - Continued

TEST: A14A

DATE: 12 SEP 1960

DATA SET RUN NUMBER COLLECTION SUMMARY

DATA SET RUN NUMBER	CONFIGURATION	SCHED. PARAMETERS/VALUES		NO. OF RUNS	TEST RUN NUMBERS										
		B	M		1	2	3	4	5	6	7	8	9	10	
31	$\phi_1 + T_{12} + S_{12} N_{25} + AT_{10}$	A	1.1	0	1*	2*	3*	4*	5	6	7	12	13	14	15
32					16*	17*	18*	19*	20	21	22	23	24	25	26
33		V	1.25		27*	28*	29*	30*	31	32	33	34	35	36	37
34	$+AT_{11}$	B	1.40			47	48		49			50		51	
35			1.75			56	55		54			53		52	
36			1.35			42	43		44			45		46	
37			1.95			57	58		59			60		61	
38			1.05			63	64		65			66		67	
39			1.15			68	69		70			71		72	
40			1.4			84	85		86			87		88	
41			1.60			149	148		147			146		145	
42			1.75			140	141		142			143		144	
43			1.85			135	136		137			138		139	
44			1.90			130	131		132			133		134	
45			1.75			125	126		127			128		129	
46			1.75			120	121		122			123		124	
47			1.95			115	116		117			118		119	
48		V	1.10			110	111		112			113		114	

1

7

13

19

25

31

37

43

49

55

61

67

75.76

COEFFICIENTS

$\beta(A) = -10 \phi + 10, 2$
 $\beta(B) = -3 - 4 \phi, 4$

OR

SCHEDULES

IDVAR (1)

IDVAR (2)

NOV

TABLE II - Concluded

[illegible]

TABLE III. - MODEL DIMENSIONAL DATA

MODEL COMPONENT: ATTACH STRUCTURE - AT₁₀GENERAL DESCRIPTION: Attach structure for Integrated Vehicle Configuration4 per VL72-000088B and VL72-000089, modified as follows: RemovedET-to-SRM aft attach struts (4) and left orbiter to right ET aftattach crossover rod.MODEL SCALE: 0.030

DRAWING NO.: SEE DESCRIPTION

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
FORWARD ATTACH		
Orbiter to Tank		
Number of struts	<u>2</u>	<u>2</u>
Diameter - In.	<u>6.000</u>	<u>0.180</u>
Location - In.		
X_O	<u>382.000</u>	<u>11.460</u>
X_T	<u>1078.000</u>	<u>32.340</u>
DRAG LINK ATTACH		
Orbiter to Tank		
Number of struts	<u>2</u>	<u>2</u>
Diameter, In.	<u>15.000</u>	<u>0.450</u>
Location, In.		
X_O	<u>1307.000</u>	<u>39.210</u>
X_T	<u>1859.000</u>	<u>55.770</u>
AFT ATTACH		
Orbiter to Tank		
Number of struts	<u>2</u>	<u>2</u>
Diameter - In.	<u>12.000</u>	<u>0.360</u>
Location - In.		
X_O	<u>1307.000</u>	<u>39.210</u>
X_T	<u>2058.000</u>	<u>61.740</u>
CROSSOVER ROD (RIGHT ORBITER TO LEFT ET)		
Diameter, In.	<u>8.000</u>	<u>0.240</u>
Location - In.		
X_O	<u>1307.000</u>	<u>39.210</u>
X_T	<u>2058.000</u>	<u>61.740</u>

TABLE III. - Continued.

MODEL COMPONENT: ATTACH STRUCTURE - AT₁₁

GENERAL DESCRIPTION: Attach structure, same as AT₁₀ except the forward attach struts are rotated to the vertical, and the structure extends from the orbiter but is not attached to the tank.

MODEL SCALE: 0.030

DIMENSIONS:	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
FORWARD ATTACH		
Orbiter to Tank		
Location - In.		
X_O	<u>382.000</u>	<u>11.460</u>
X_T	<u>1133.000</u>	<u>33.990</u>
Clearance, tank to strut - In.	<u>16.667</u>	<u>0.500</u>
DRAG LINK ATTACH		
Orbiter to Tank		
Clearance, tank to strut - In.	<u>8.333</u>	<u>0.250</u>
AFT ATTACH		
Orbiter to Tank		
Clearance, Tank to strut - In.	<u>8.333</u>	<u>0.250</u>
Crossover Rod		
Clearance, tank to strut - In.	<u>8.333</u>	<u>0.250</u>

TABLE III. - Continued.

MODEL COMPONENT: BODY - B₂₆GENERAL DESCRIPTION: Orbiter Fuselage Configuration 140 A/BNOTE: B₂₆ identical to B₂₄ except underside of fuselage refaired to
accept W₁₁₆.Model Scale = .030DRAWING NUMBER: VL70-000193
VL70-000140A

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Length (Body Fwd Sta $X_0 = 238$) - in.	<u>1293.3</u>	<u>38.799</u>
Max. Width (at $X_0 = 1520$) - in.	<u>262.0</u>	<u>7.860</u>
Max. Depth (at $X_0 = 1464$) - in.	<u>250.0</u>	<u>7.500</u>
Fineness Ratio	<u>0.26357</u>	<u>0.26357</u>
Area - ft ²		
Max. Cross-Sectional	<u>340.88462</u>	<u>0.30679</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>

TABLE III. - Continued.

MODEL COMPONENT: CANOPY - CgGENERAL DESCRIPTION: Configuration 3AModel Scale = .030

DRAWING NUMBER

VL70-000140AVL70-000143ADIMENSION:FULL SCALEMODEL SCALELength ($X_0=434.643$ to 670)235.3577.06071Max Width ($X_0=513.127$)152.4124.57236Max Depth ($X_0=485.0$)25.0000.75000

Fineness Ratio

Area

Max Cross-Sectional

Planform

Wetted

Base

TABLE III. - Continued.

MODEL COMPONENT: ELEVON - E₂₆GENERAL DESCRIPTION: Configuration 4NOTE: VL70-000400 data for (1) of (2) sides. Identical to E₂₅ except
airfoil thicknessModel Scale = .030DRAWING NUMBER:VL70-000200
VL70-000140 BDIMENSIONS:FULL-SCALEMODEL SCALE

Area	<u>223.5814</u>	<u>0.20122</u>
Span (equivalent)	<u>368.34</u>	<u>11.05020</u>
Inb'd equivalent chord	<u>119.623</u>	<u>3.58869</u>
Outb'd equivalent chord	<u>55.1922</u>	<u>1.65577</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.2096</u>	<u>0.2096</u>
At Outb'd equiv. chord	<u>0.4004</u>	<u>0.4004</u>
Sweep Back Angles, degrees		
Leading Edge	<u>0.00</u>	<u>0.00</u>
Tailing Edge	<u>-10.056</u>	<u>-10.056</u>
Hingeline	<u>0.00</u>	<u>0.00</u>
Area Moment (Normal to hinge line)	<u>851.1502</u>	<u>0.76604</u>

TABLE III. - Continued.

MODEL COMPONENT: Body Flap - F₈GENERAL DESCRIPTION: Configuration 4Model Scale - .030
DRAWING NUMBERVL70-000140B, VL70-000200

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length in.	<u>84.7</u>	<u>2.541</u>
Max Width in.	<u>262.308</u>	<u>7.86924</u>
Max Depth in.	<u>23.000</u>	<u>0.69000</u>
Fineness Ratio	<u> </u>	<u> </u>
Area - ft ²		
Max Cross-Sectional	<u> </u>	<u> </u>
Planform	<u>158.85350</u>	<u>0.14297</u>
Wetted	<u> </u>	<u> </u>
Base	<u>41.89642</u>	<u>0.03771</u>

TABLE III. - Continued.

MODEL COMPONENT: OMS POD - M7GENERAL DESCRIPTION: Configuration 3AModel Scale = .030

DRAWING NUMBER

VL70-000140AVL70-000145DIMENSION:FULL SCALEMODEL SCALELength (OMS Fwd Sta $X_0=1233.0$) - IN.327.0009.810Max Width (@ $X_0=1450.0$) - IN.94.52.8350Max Depth (@ $X_0=1493.0$) - IN.109.0003.270

Fineness Ratio

Area

Max Cross-Sectional

Planform

Wetted

Base

TABLE III. - Continued.

MODEL COMPONENT: BSRM NOZZLES - N25GENERAL DESCRIPTION: Configuration 3A BSRM Nozzles

Model Scale = .030

DRAWING NO.

VL72-000000A
VL77-000000A

DIMENSIONS

FULL-SCALE

MODEL SCALE

MACH NO. _____

DIAMETER DEX ~ IN (One Nozzle)

141.34.2390

DIAMETER DT ~ IN

DIAMETER DIN ~ IN

ON ~ DEGREES

AREA - FT² (One Nozzle)

MAX CROSS-SECTIONAL

108.895950.09801

GIMBAL ORIGIN

X₀Y₀Z₀

LEFT NOZZLE ~ IN. F.S.

1825.3-243400

RIGHT NOZZLE ~ IN. FS

1825.3+243400

NULL POSITION - DEG.

PITCHYAW

LEFT NOZZLE

+8+8

RIGHT NOZZLE

+8+8

TABLE III. - Continued.

MODEL COMPONENT: NOZZLES - N28GENERAL DESCRIPTION: Configuration 3A OMS NozzleModel Scale = .030DRAWING NO. VL70-000140A

DIMENSIONS	FULL-SCALE	MODEL SCALE
MACH NO. _____		
DIAMETER DEX ~ IN (One nozzle)	_____	_____
DIAMETER DT ~ IN	_____	_____
DIAMETER DIN ~ IN	_____	_____
ON ~ DEGREES	_____	_____
AREA - Ft ² (one nozzle)		
MAX CROSS-SECTIONAL	_____	_____
GIMBAL ORIGIN	<u>X_o</u>	<u>Y_o</u> <u>Z_o</u>
LEFT NOZZLE ~ IN.	<u>1518.0</u>	<u>-88.0</u> <u>492.0</u>
RIGHT NOZZLE ~ IN.	<u>1518.0</u>	<u>+88.0</u> <u>492.0</u>
NULL POSITION	<u>PITCH</u>	<u>YAW</u>
LEFT NOZZLE (Null Pitch 15°49'; Yaw 12°17' OUTB'D)	<u>±8°</u>	<u>13°17' OUTB'D</u> <u>2°30' INB'D</u>
RIGHT NOZZLE (Null Pitch 15°49'; Yaw 12°17' OUTB'D)	<u>±8°</u>	<u>13°17' OUTB'D</u> <u>2°17' INB'D</u>

TABLE III. - Continued.

MODEL COMPONENT: RUDDER - R5GENERAL DESCRIPTION: 2A, 3 and 3A Configuration per Rockwell LinesVL70-000095Model Scale = .030DRAWING NUMBER: VL70-000095

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
Area - FT ²	<u>106.38</u>	<u>0.09574</u>
Span (equivalent) - IN.	<u>201.0</u>	<u>6.0300</u>
Inb'd equivalent chord	<u>91.585</u>	<u>2.74755</u>
Outb'd equivalent chord	<u>50.833</u>	<u>1.52499</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
At Outb'd equiv. chord	<u>0.400</u>	<u>0.400</u>
Sweep Back Angles, degrees		
Leading Edge	<u>34.83</u>	<u>34.83</u>
Tailing Edge	<u>26.25</u>	<u>26.25</u>
Hingeline	<u>34.83</u>	<u>34.83</u>
Area Moment (Normal to hinge line)- FT ³	<u>526.13</u>	<u>0.01420</u>
Product of Area and Mean Chord		

TABLE III. - Continued.

MODEL COMPONENT: BOOSTER SOLID ROCKET MOTOR - S₁₂GENERAL DESCRIPTION: Configuration 3A, Data for (1) of (2) sides,
per Rockwell Lines VL77-000036AModel Scale = .030

DRAWING NUMBER

VL72-000088AVL77-000036ADIMENSION:FULL SCALEMODEL SCALE

Length (Includes Nozzle) - IN.	<u>1741.0</u>	<u>52.2300</u>
Max Width (Tank Dia) - IN.	<u>142.3</u>	<u>4.2690</u>
Max Depth (Aft Shroud) - IN.	<u>192.0</u>	<u>5.7600</u>
Fineness Ratio	<u>9.06771</u>	<u>9.06771</u>
Area - FT ²		
Max Cross-Sectional	<u>201.06193</u>	<u>0.18096</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u> </u>	<u> </u>
WP of BSRM Centerline (Z _T) - IN.	<u>400</u>	<u>12.000</u>
FS of BSRM Nose (X _T) - IN.	<u>200</u>	<u>6.000</u>

TABLE III. - Continued.

MODEL COMPONENT: EXTERNAL TANK - T12GENERAL DESCRIPTION: External Oxygen Hydrogen Tank

NOTE: Identical to T11 with external fuel lines added

Model Scale = .030DRAWING NUMBER VL78-000031A
VL78-000041A

<u>DIMENSION:</u>	<u>FULL SCALE</u>	<u>MODEL SCALE</u>
Length - IN. (Nose @ $X_T = 309$)	<u>1865</u>	<u>57.629</u>
Max Width (Dia) - IN.	<u>324</u>	<u>9.72</u>
Max Depth	<u></u>	<u></u>
Fineness Ratio	<u>5.75617</u>	<u>5.75617</u>
Area - FT ²		
Max Cross-Sectional	<u>572.555</u>	<u>17.177</u>
Planform	<u></u>	<u></u>
Wetted	<u></u>	<u></u>
Base	<u></u>	<u></u>
WP of Tank Centerline (X_T) - IN.	<u>400.0</u>	<u></u>

TABLE III. - Continued.

MODEL COMPONENT: VERTICAL - V₈GENERAL DESCRIPTION: Configuration 3A

NOTE: Similar to V5 with radius on TE upper corner and LE lower corner
 where vertical meets fuselage.

Model Scale = .030DRAWING NUMBER: VL70-000140A
VL70-000146A

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u>	<u>MODEL SCALE</u>
<u>TOTAL DATA</u>		
Area (Theo) Ft ²	<u>413.253</u>	<u>0.37193</u>
Planform		
Span (Theo) In	<u>315.720</u>	<u>9.47160</u>
Aspect Ratio	<u>1.675</u>	<u>1.675</u>
Rate of Taper	<u>0.507</u>	<u>0.507</u>
Taper Ratio	<u>0.40399</u>	<u>0.40399</u>
Sweep Back Angles, degrees		
Leading Edge	<u>45.00</u>	<u>45.00</u>
Trailing Edge	<u>25.947</u>	<u>25.947</u>
0.25 Element Line	<u>41.130</u>	<u>41.1300</u>
Chords:		
Root (Theo) WP	<u>268.500</u>	<u>8.05500</u>
Tip (Theo) WP	<u>108.470</u>	<u>3.25410</u>
MAC	<u>199.80756</u>	<u>5.99423</u>
Fus. Sta. of .25 MAC	<u>1463.50</u>	<u>43.9050</u>
W. P. of .25 MAC	<u>635.522</u>	<u>19.06566</u>
B. L. of .25 MAC	<u>0.00</u>	<u>0.00</u>
Airfoil Section		
Leading Wedge Angle Deg	<u>10.00</u>	<u>10.00</u>
Trailing Wedge Angle Deg	<u>14.920</u>	<u>14.920</u>
Leading Edge Radius (Min) - IN.	<u>2.00</u>	<u>0.060</u>
Void Area	<u>13.17</u>	<u>0.01185</u>
Blanketed Area	<u>0.00</u>	<u>0.00</u>

TABLE III. - Concluded.

MODEL COMPONENT: <u>WING-WJ16</u>		
GENERAL DESCRIPTION: <u>Configuration 4</u>		
NOTE: <u>Identical to WJ14 except airfoil thickness. Dihedral angle is along trailing edge of wing.</u>		
Model Scale = <u>.030</u>		
TEST NO.	DWG. NO. <u>VL70-000140B</u> <u>VL70-000200</u>	
DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.) Ft^2		
Planform	2690.00	2.4210
Span (Theo) In.	936.6816	28.10045
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees (at $X_0=1506.623, Y_0=$	3.500	3.500
Incidence Angle, degrees 105, $Z_0=282.75$)	0.500	0.500
Aerodynamic Twist, degrees	+3.000	+3.000
Sweep Back Angles, degrees		
Leading Edge	45.00	45.00
Trailing Edge	-10.056	-10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo) B.P.O.O.	689.2429	20.67729
Tip, (Theo) B.P.	137.8486	4.13546
MAC	474.8117	14.24435
Fus. Sta. of .25 MAC	1126.721	33.80163
W.P. of .25 MAC	291.00	8.73000
B.L. of .25 MAC	187.33491	5.62005
EXPOSED DATA		
Area (Theo) Ft^2	1812.2205	1.63010
Span, (Theo) In. BP108	736.6816	22.10045
Aspect Ratio	2.058	2.058
Taper Ratio	0.2451	0.2451
Chords		
Root BP108	570.6230	17.11869
Tip $1.00 \frac{b}{2}$	137.8512	4.13554
MAC	354.2376	10.62713
Fus. Sta. of .25 MAC	1164.237	34.92711
W.P. of .25 MAC	292.00	8.76000
B.L. of .25 MAC	239.67786	7.19034
Airfoil Section (Rockwell Mod NASA)		
XXXX-64		
Root $b = 0.425 \frac{b}{2}$	0.113	0.113
Tip $b = 1.00 \frac{b}{2}$	0.12	0.12
Data for (1) of (2) Sides		
Leading Edge Cuff		
Planform Area Ft^2	118.333	0.10650
Leading Edge Intersects Fus M. L. 0 Sta	505.0	15.15000
Leading Edge Intersects Wing 0 Sta	1003.5	30.10500

TABLE IV. - ORBITER FUSELAGE PRESSURE ORIFICE LOCATIONS

ORBITER X_0 IN.		RADIAL LOCATION ϕ DEGREES																		
FULL	MODEL $X_0/10$	0	20	40	55	70	90	105	110	120	135	140	150	151	156	162	165	169	174	180
155	7.05	0					8													9
243	7.35	.008					15			16			17							16
165	7.95	.023	10	12	13	14	15			25			26							27
155	8.35	.047	19	20	21	22	24			34			35							36
155	9.75	.070	28	29	30	31	33			43			44							45
155	11.40	.112	37	38	39	40	42													
143	13.20	.159													54			55	46	56
143	15.00	.167	47	48	49	50	52			53				57		58				
143	15.95	.178																		
500	16.00	.205	59	60	61	62	64			65		66	67				68			69
500	16.80	.252	70	71	72	73	75			74			75				76			77
625	18.75	.301	78	79	80	81	83			82			83				84			85
725	21.75	.379	86	87	88	89	91			90			91				92			93
880	26.40	.499	94	95	96	97				98			99				100			101
980	29.40	.576	102	103																
1080	32.40	.655	104	105	106	107				108			109				110			111
1180	35.40	.730	112	113	114	115				116			117							118
1245	37.35	.781	119	120	121	122	123			124		125	126				127			128
1300	39.00	.825	129	130	131	132	133			134		135	136							137
1375	41.25	.882	138	139	140	141	142			143		144	145				146			
1430	42.90	.925	147	148	149	150	151			152		153	154				155			
1480	44.40	.965	156	157	158	159	160			161		162	163				164			
a 1530	45.90	1.002							165	166										
b 1530	45.90	1.002							167	168										
c 1555	46.65	1.021	169	170																
d 1590	47.70	1.048	171	172																
d 1590	47.70	1.048	173	174																

 $X_0 = 1293.3$ full scale $X_0 = 38.799$ model

data in datasets R31BXX

a: OMS pod, inside

b: OMS pod, outside

c: Body flap lower surface

d: Body flap upper surface

TABLE V. - ORBITER WING PRESSURE ORIFICE LOCATIONS

ORBITER WING

ORBITER B.P. NO.		X/C ~ LOCAL WING CHORD																							
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
140	4.20	299	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180	180
170	5.10	364	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202
200	6.00	427	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214	214
230	7.50	534	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238
300	9.45	673	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250	250
365	10.95	800	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283	283
415	12.45	887	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300	300

- 1 X/C = .19
- 2 X/C = .34
- 3 X/C = .03
- 4 X/C = .045

data in data sets RBILXX (lower surface and RBIUXX (upper surface)

ORIGINAL PAGE
OF POOR QUALITY

TABLE VI. - ORBITER VERTICAL TAIL PRESSURE ORIFICE LOCATIONS

ORBITER VERTICAL TAIL

VERTICAL $W_L \sim Z_0$			X/C_V									
FULL	MODEL	TV		0	.025	.05	.15	.30	.52	.685	.775	.90
550	16.50	.158	RH LE LH	316		324 317	325 319	326 320	327 321	328 322	329 323	
600	18.00	.316	RH LE LH	330		339 331	340 333	341 334	342 335	343 336	344 337	345 338
690	20.70	.600	RH LE LH	346		355 347	356 349	357 350	358 351	359 352	360 353	361 354
765	22.95	.840	RH LE LH	362		371 363	372 365	373 366	374 367	375 368	376 369	377 370
792	23.76	.925	RH LE LH	378		387 379	388 381	389 382	390 383	391 384	392 385	393 386

data in datasets RBIVXX (left side) and RBIRXX (right side)

TABLE VII. - ORBITER BASE, BODYFLAP, AND OMS NOZZLE PRESSURE ORIFICE LOCATIONS

ORBITER BASE

LOCATION	ORIFICE NUMBER
Orbiter Sting Cavity	1
Orbiter Base (Lower Left Corner)	2
OMS Nozzle Base	3

data in datasets RB1CXX

RUDDER FLARE BASE

RUDDER $\eta \sim Z_o$		X/C _V
FULL	MODEL	.75
725	10.75	4
625	21.75	5

data in datasets RB1CXX

BODY FLAP

ORBITER $\sim X_o$		$\phi \sim \text{Deg}$	
FULL	MODEL	0	40
1555	46.65	169	170
1590	47.70	173	174
1590	47.70	171	172

data in datasets RB1FXX

LEFT OMS NOZZLE SURFACE

X ^o IN. FWD. NOZZLE EXIT		$\phi \sim \text{DEG.}$		
FULL	MODEL	135	180	225
10	.30	175	176	177
20	.60		178	

data in datasets RB1EXX

TABLE VIII. - EXTERNAL TANK PRESSURE ORIFICE LOCATIONS

EXTERNAL TANK

TANK STATION $\sim X_T$			$\phi \sim \text{DEG.}$									
FULL SCALE	MODEL SCALE	X_T / X_T	0	30	60	90	120	135	150	165	180	270
309	9.27	0	503			505					506	507
324	9.72	.008	504	509	510	511	512		513	521	514	
400	12.00	.049	508	516	517	518	519		520	529	522	
520	15.00	.113	515	524	525	526	527		528	537	530	
640	19.20	.178	523	532	533	534	535		536	545	538	
670	20.10	.194	531	540	541	542	543		544	554	546	
710	21.30	.215	539	548	549	550	551	552	553	562	555	564
760	22.80	.242	547	557	558	559	560	569	561	571	563	
850	25.50	.290	556	566	567	568	569	577	570	579	572	
950	28.50	.344	565	574	575	576	577	586	578	588	580	
1050	31.30	.394	573	582	583	584	585		587	596	589	
1150	34.50	.451	581	591	592	593	594		595	605	597	
1250	37.50	.505	590	599	600	601	602	603	604	613	606	
1350	40.50	.558	598	608	609	610	611		612	622	614	
1500	45.00	.638	607	616	617	618	619	620	621	631	623	
1700	51.00	.746	615	625	626	627	628	629	630	639	632	
1900	57.00	.853	624	634	635		636	637	638		640	
2040	61.20	.928	633									
TANK BASE			501								502	
STING CAVITY												

$l_T = 1865 \text{ IN. FULL SCALE}$
 $55.950 \text{ IN. MODEL SCALE}$

data in datasets RB1TXX

TABLE IX. - SRM PRESSURE ORIFICE LOCATIONS

LEFT SRM

SRM STATION ~ X _S		Ø ~ DEG.									
FULL SCALE	MODEL SCALE	X _S IN.	0	45	90	135	180	225	270	315	
200	6.00	0	805	807	808	809	810	811	812	813	
260	7.80	.034	806	815	816	817	818	819	820	821	
370	11.10	.098	814	823	824	825	826	827	828	829	
400	12.00	.115	822	830	831	832	833	834	835	836	
450	13.50	.144	829	838	839	840	841	842	843	844	
550	16.50	.201	837		846		847	848	849	850	
700	21.00	.287	845		852		853		854		
850	25.50	.373	851		856		857				
1050	31.50	.488	855		859		860				
1250	37.50	.603	858		862		863		864		
1450	43.50	.718	861		866		867		868		
1650	49.50	.833	865		871	872	873	874	875	876	
1750	52.50	.890	869	870	879	880	881	882	883	884	
1796	53.88	.917	877	878	887	888	889	890	891	892	
1835	55.05	.939	885	886	895	896	897	898	899	900	
1808	56.04	.958	893	894		903		804			
SKIRT BASE			802								
NOZZLE BASE			801								
NOZZLE EXTERNAL PRESSURES											
1850	55.50	.948	901	902	903	904	905	906	907	908	
1905	57.15	.979	909	910	911	912	913	914	915	916	
1923	57.84	.993	917	918	919	920	921	922	923	924	

i_s = 1741 IN. FULL SCALE
52.53 IN. MODEL SCALE

data in datasets RBISXX

TABLE XI. - EXTERNAL TANK ATTACH POINT PRESSURE ORIFICE LOCATIONS

X _T Full Scale	1103	1093	1083	1073	1063	1053	1043	
X _T Model Scale	33.09	32.79	32.49	32.19	31.89	31.59	31.29	
X _T /l _T	.424	.419	.413	.408	.402	.397	.391	
								Ø DEG.
FWD ATTACH POINT (ORBITER TO E-T)	684	676	668	660				182.84
	685	677	669	661				186.38
	686	678	670	662	655			189.92
	687	679	671	663	656	652		193.46
	688	680			657	653	651	197.0
	689	681	673	665	658	654		200.54
	690	682	674	666	659			204.06
	691	683	675	667				207.62

data in datasets RB12XX

TABLE XI. - EXTERNAL TANK ATTACH POINT PRESSURE ORIFICE LOCATIONS
(CONTINUED)

FWD DRAG LINK ATTACH POINT	X_T FULL SCALE	1874	1864	1854	1844	1834	1824	1814	
	X_T MODEL SCALE	56.22	55.92	55.62	55.32	55.02	54.72	54.42	
	X_T/l_T	.839	.834	.828	.823	.818	.812	.807	
									$\phi \sim$ DEG.
		719	713	707					222.84
		720	714	708	701				226.38
		721	715	709	702	696			229.92
		722		710	703	697	693		233.46
					704	698	694	692	237.00
						699	695		240.54
		723	718	712	706	700			244.08

data in datasets RB12XX

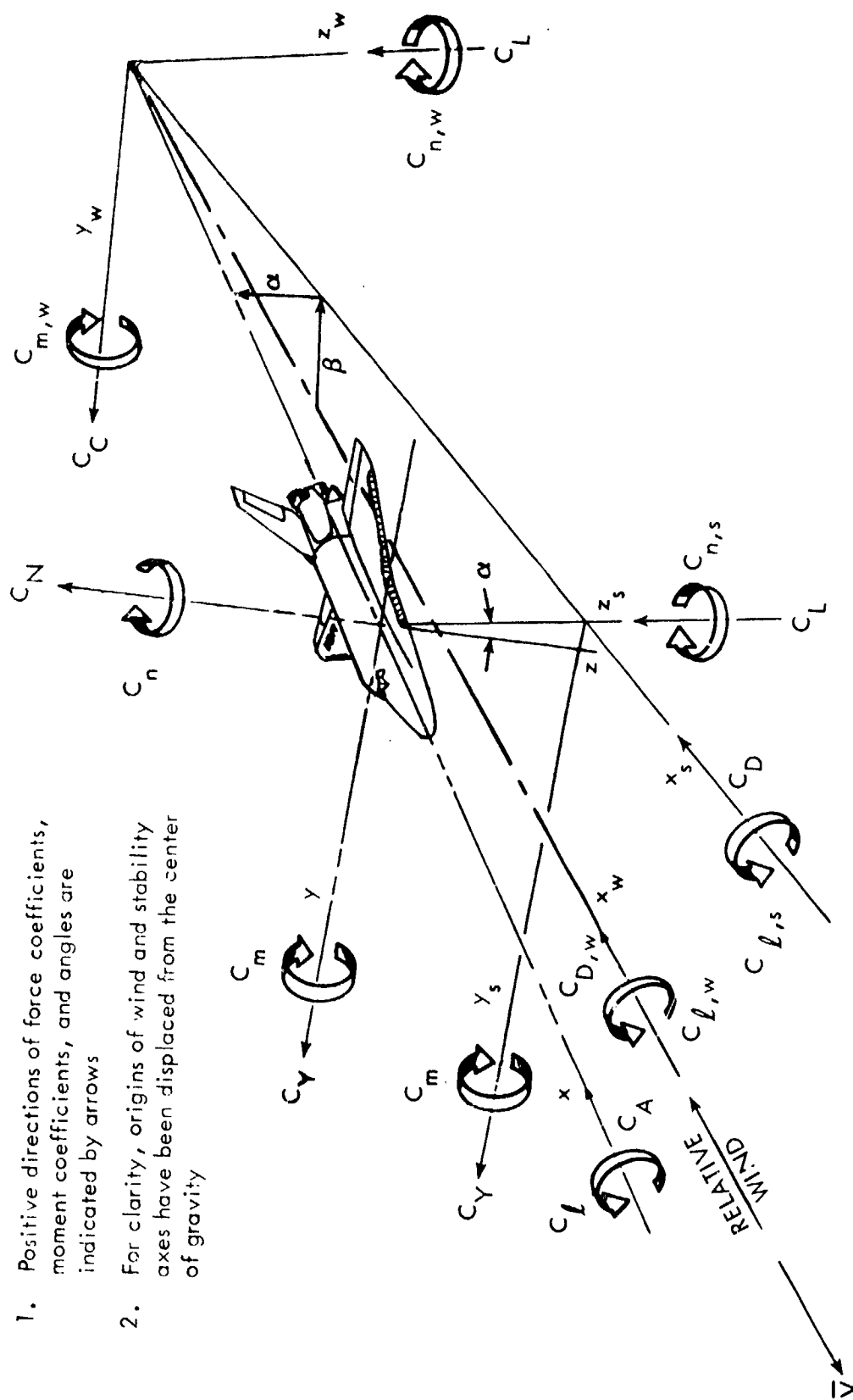
TABLE XI. - EXTERNAL TANK ATTACH POINT PRESSURE ORIFICE LOCATIONS
(CONCLUDED)

	X_T FULL SCALE	2078	2068	2058	2048	2038	2028	2018	
	X_T MODEL SCALE	62.34	62.04	61.74	61.44	61.14	60.84	60.54	
	X_T/l_T	.948	.943	.938	.932	.927	.921	.916	
									$\emptyset \sim \text{DEG.}$
AFT UPPER ATTACH		777	766	754					234.04
		778	767	755	742				237.58
		779	768	756	743	732			241.12
		780	769		744	733	726		244.66
		781	770		745	734	727	724	248.2
					746	735	728		251.74
			771	759	747	736			255.28
		782	772	760					323.51
AFT LOWER ATTACH		783	773	761	748				327.05
		784	774	762	749	737			330.59
		785	775		750	738	729		334.13
		786	776		751	739	730	725	337.67
					752	740	731		341.21
				765	753	741			344.75

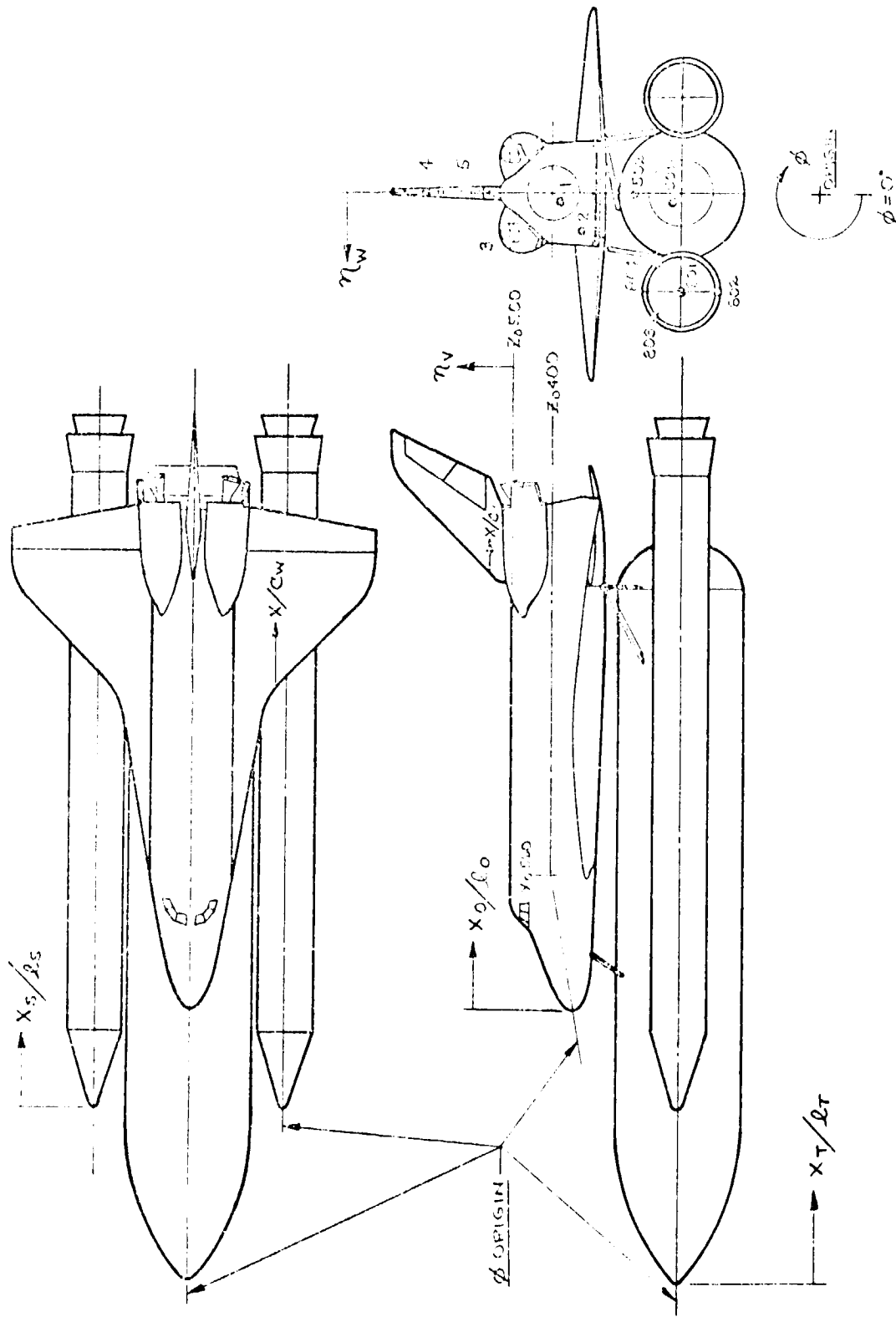
data in datasets RB12XX

Notes:

1. Positive directions of force coefficients, moment coefficients, and angles are indicated by arrows
2. For clarity, origins of wind and stability axes have been displaced from the center of gravity



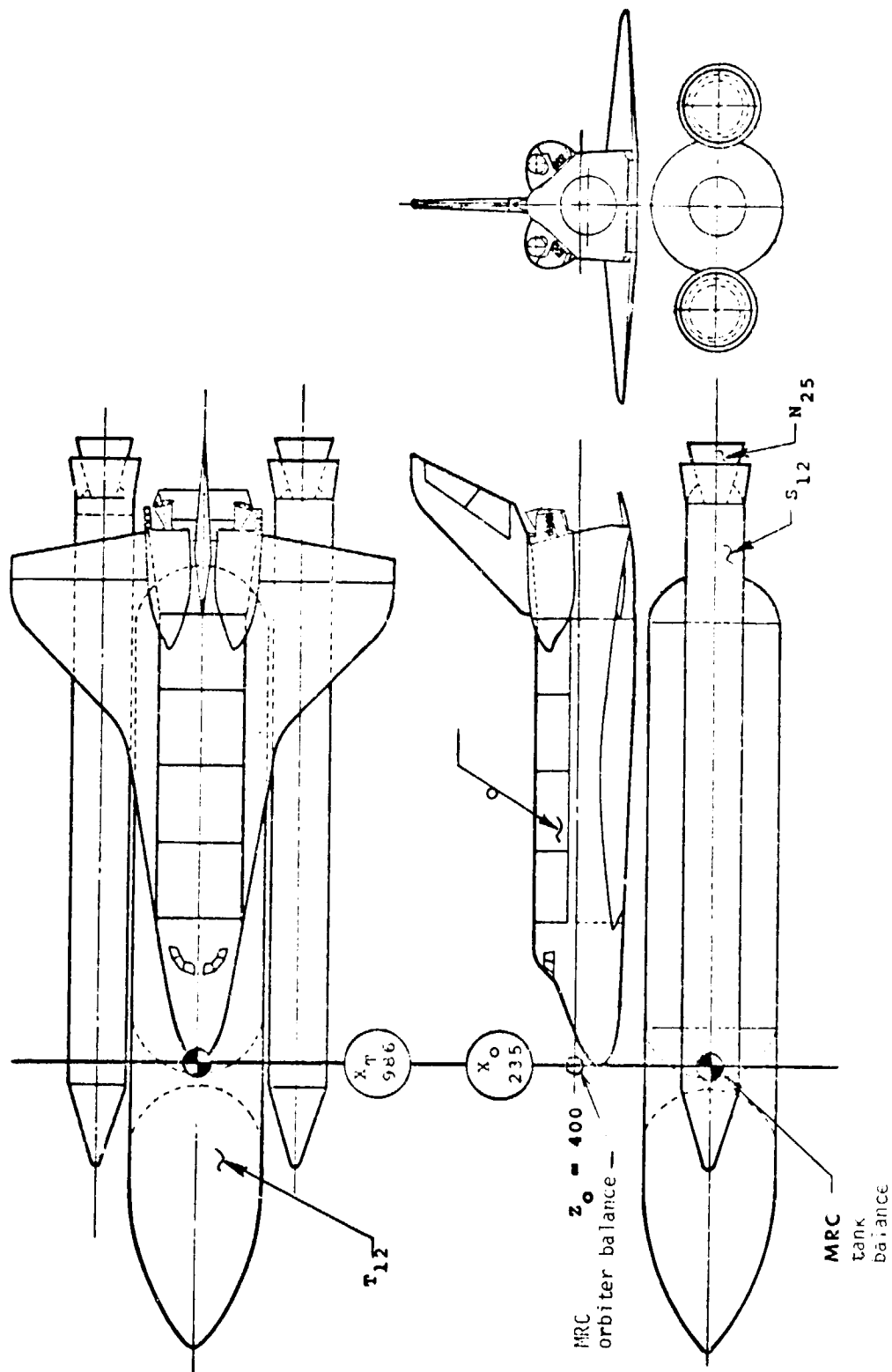
a. Stability and body axis systems
Figure 1. - Axis Systems



b. Orifice location nomenclature diagram

Figure 1. - Concluded

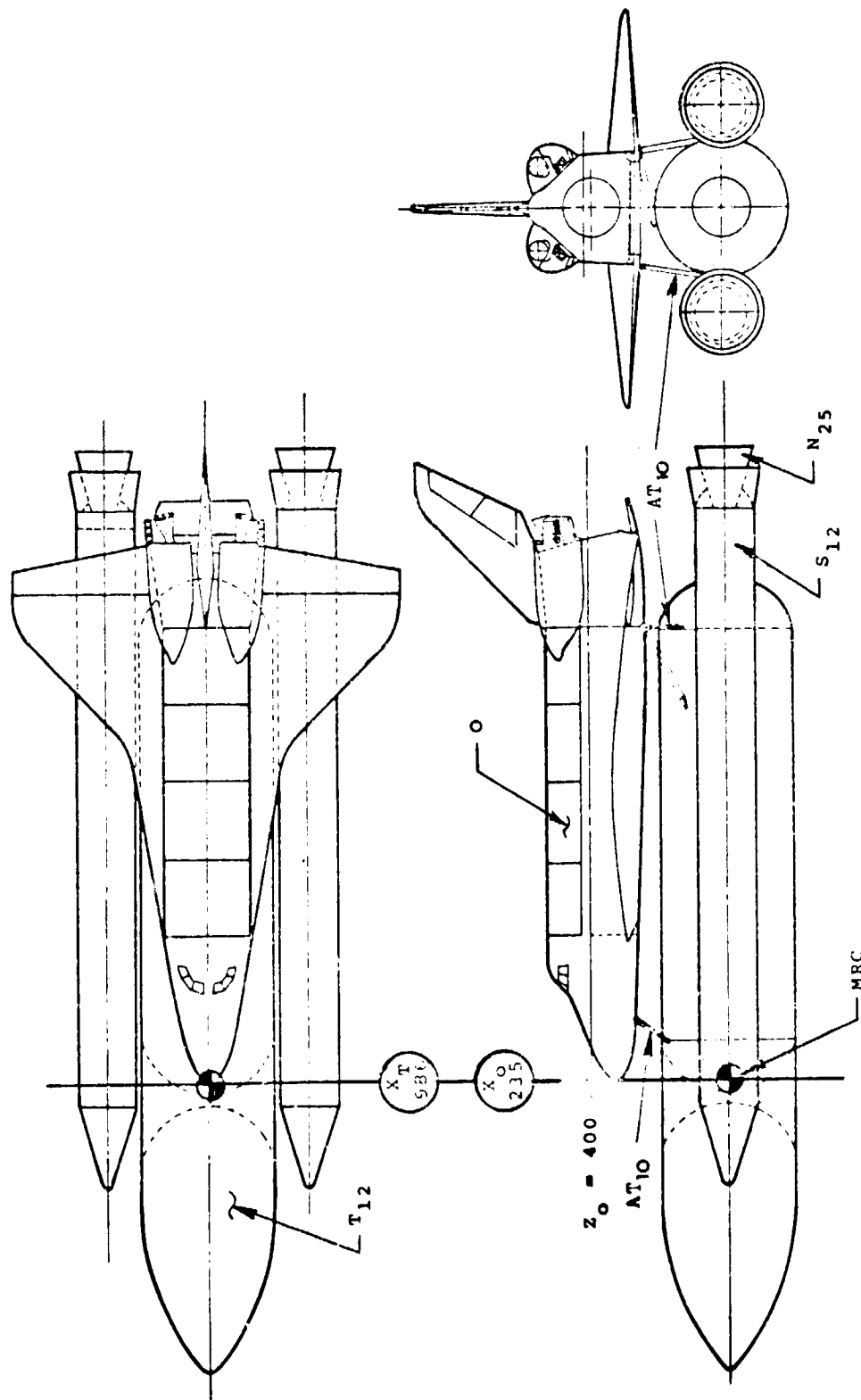
LV



a. Integrated vehicle - 2 balances, no attach structure

Figure 2. - Model Sketches

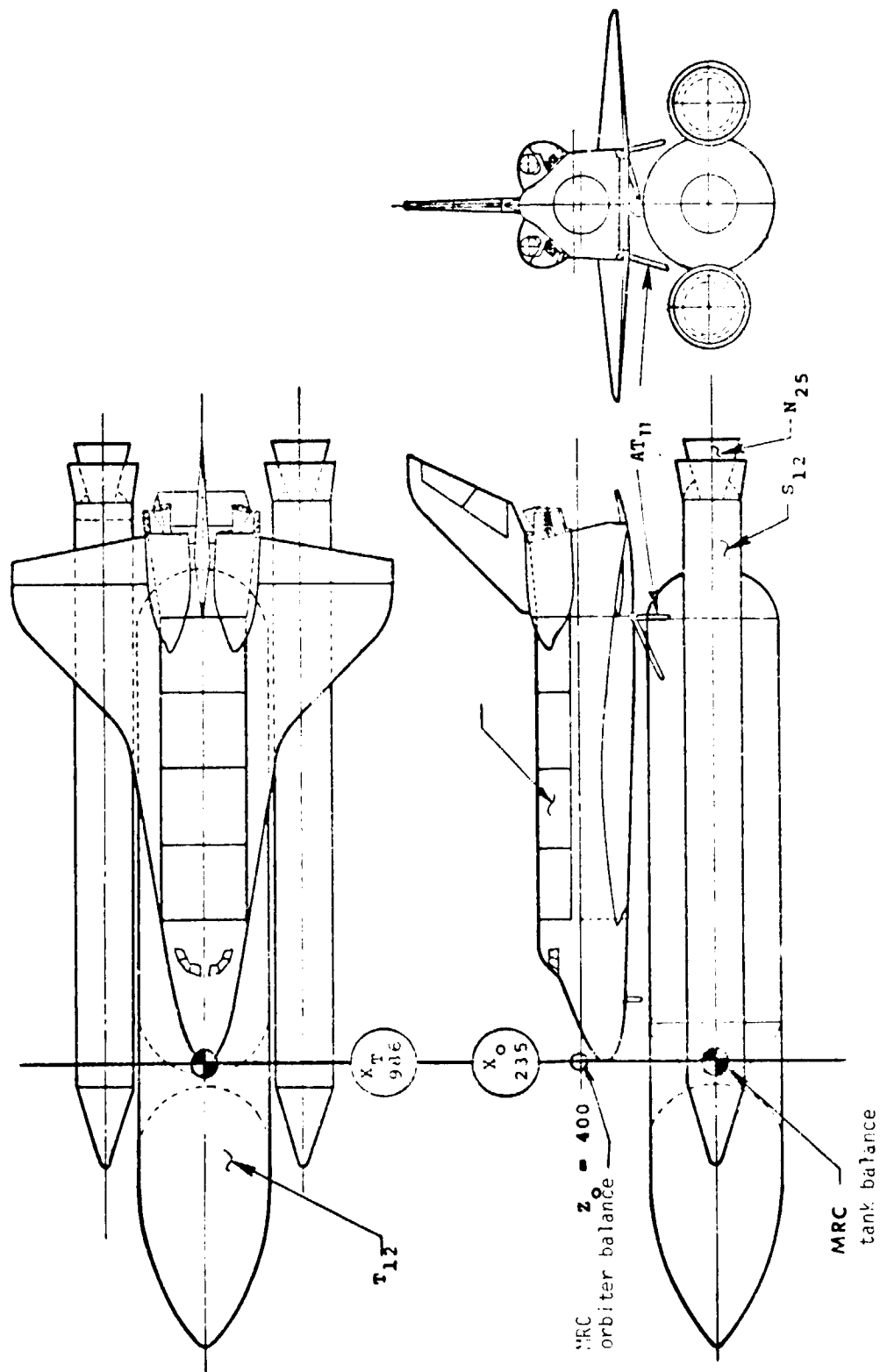
LVAP



b. Integrated vehicle - 1 balance with attach structure

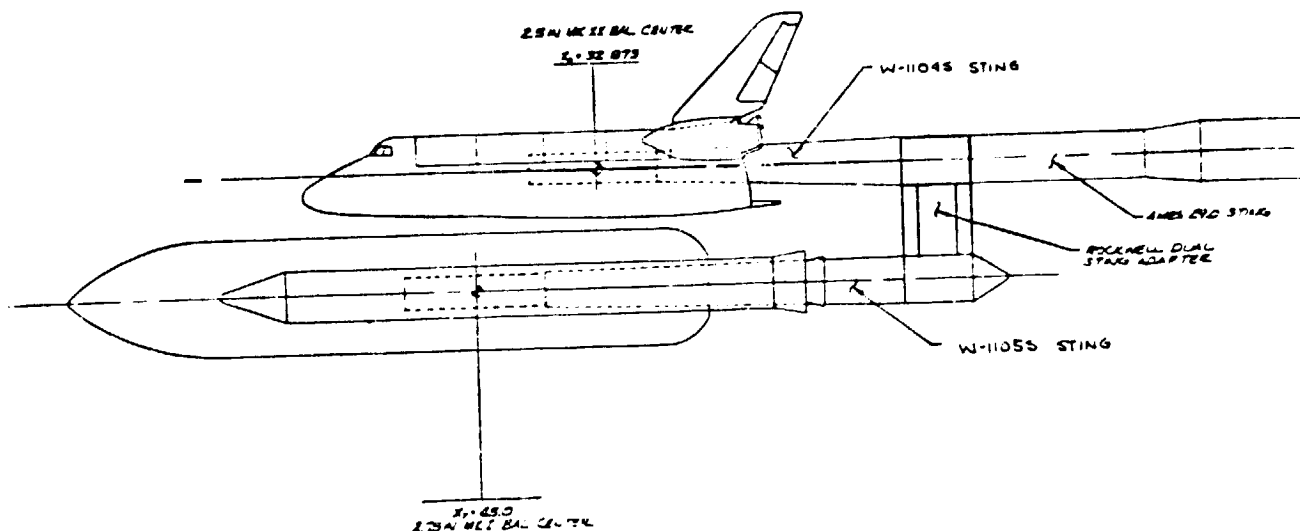
Figure 2. - Continued

LVAP

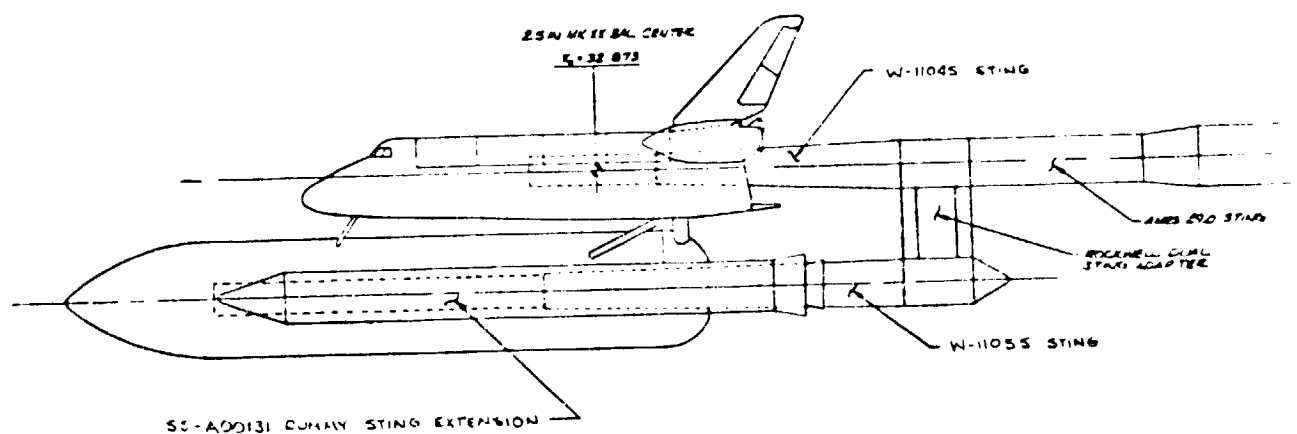


c. Integrated vehicle - 2 balances with attach structure

Figure 2. - Continued



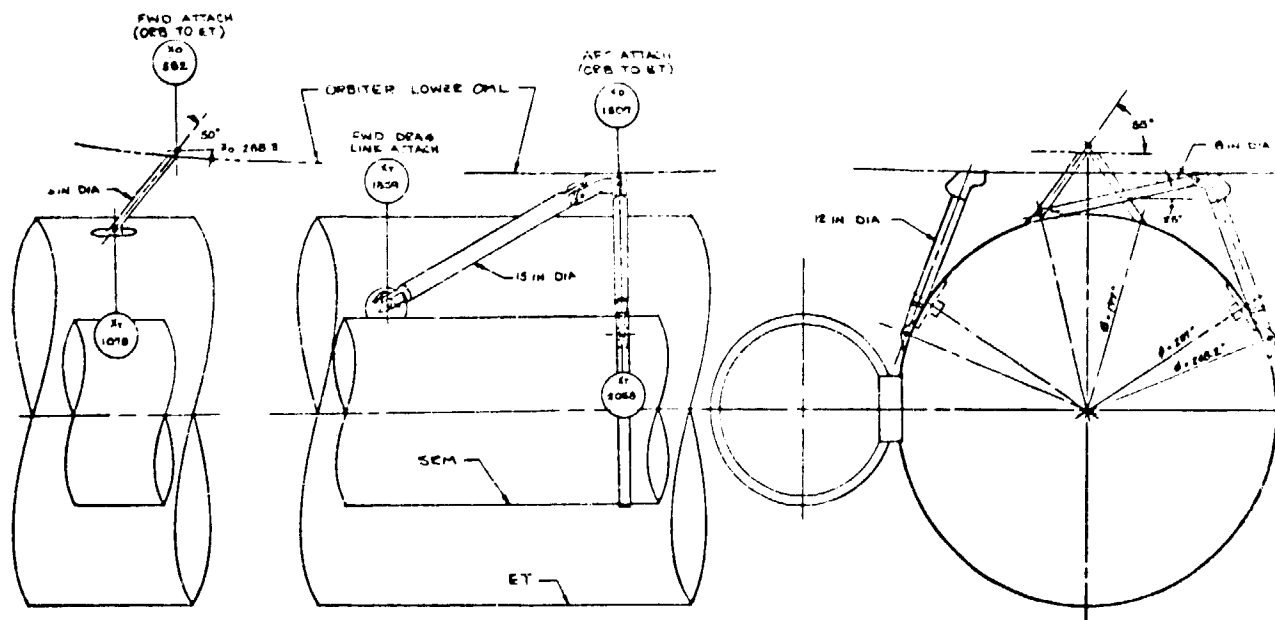
DUAL BALANCE CONFIGURATION ~ LV ± LVAP



SINGLE BALANCE CONFIGURATION ~ LVA

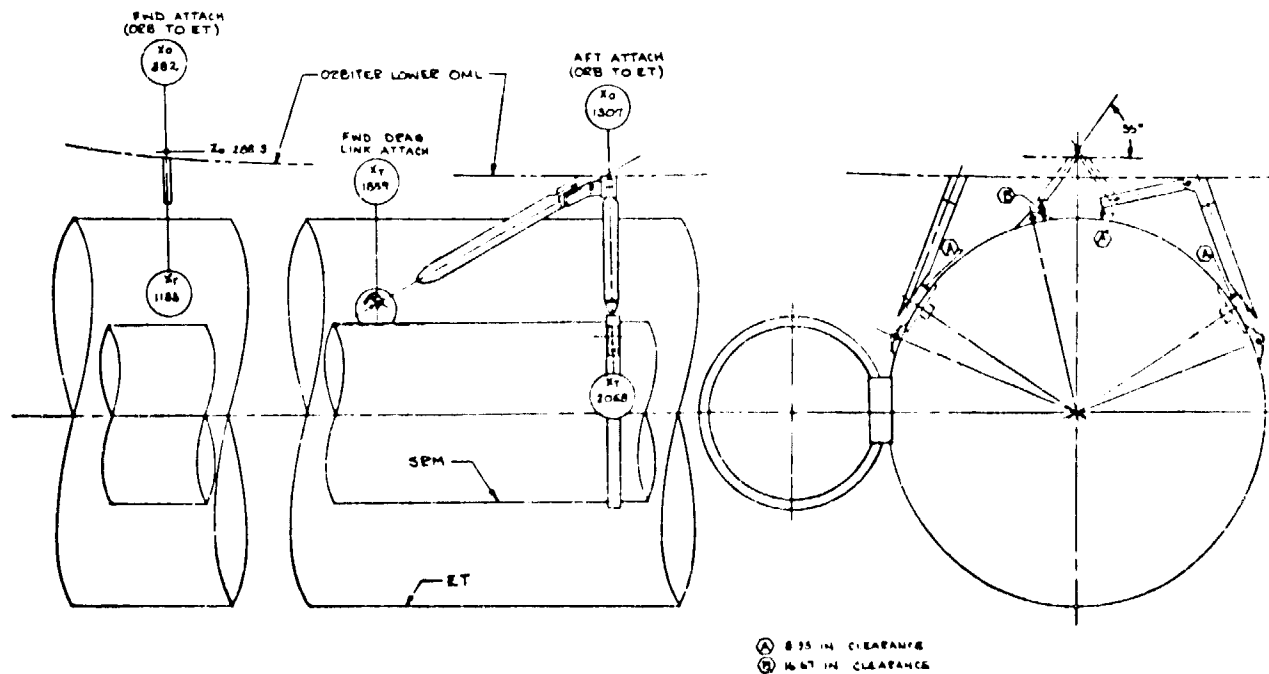
d. Installation side views

Figure 2. - Continued



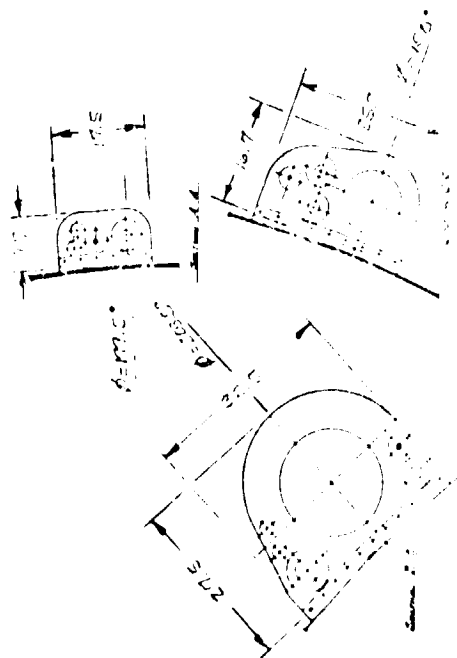
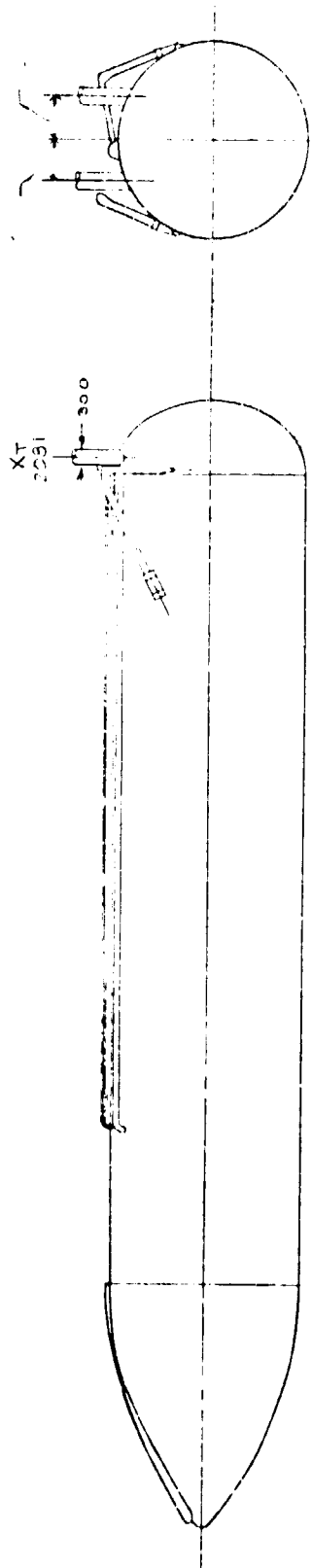
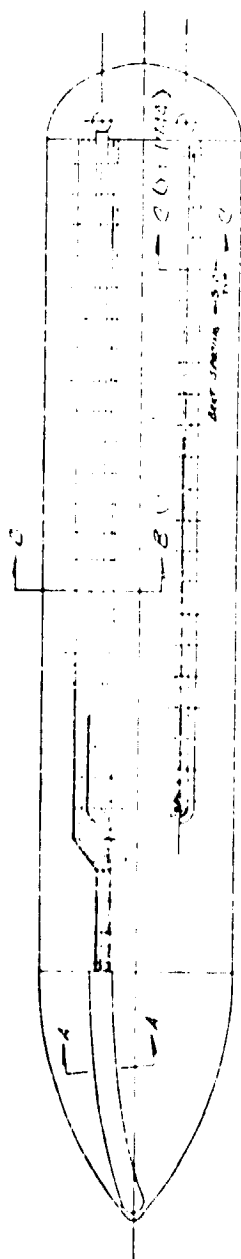
ATTACH HARDWARE CONFIGURATION - At10

ATTACH HARDWARE CONFIGURATION - At11



e. Attach hardware

Figure 2. Continued

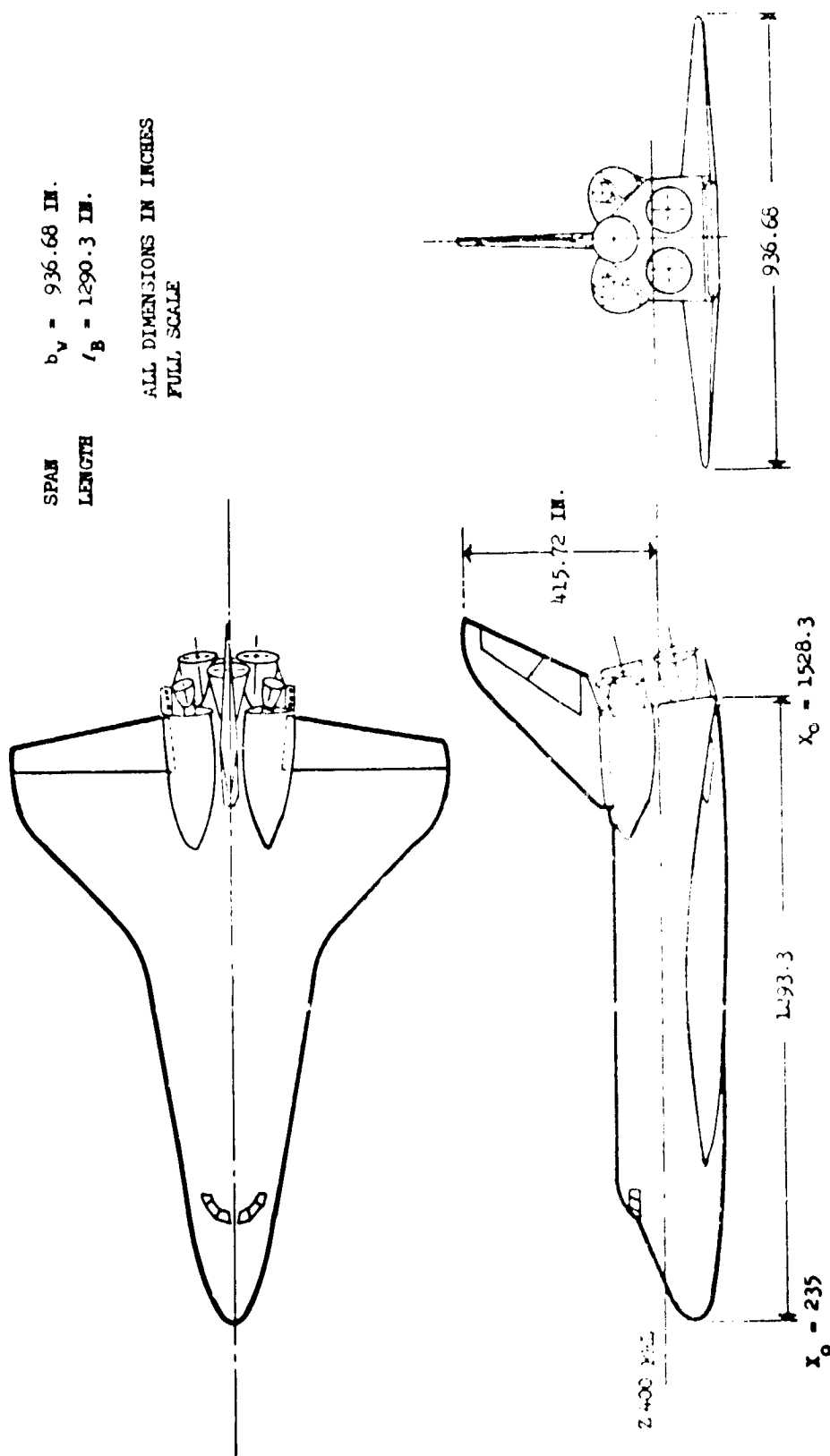


f. External tank protuberances
Figure 2. - Continued

REFERENCE	DIMENSIONS (FS)
AREA	$S_v = 2600 \text{ FT}^2$
MAC	$C = 474.8 \text{ IN.}$

SPAN $b_v = 936.68 \text{ IN.}$
 LENGTH $l_B = 1290.3 \text{ IN.}$

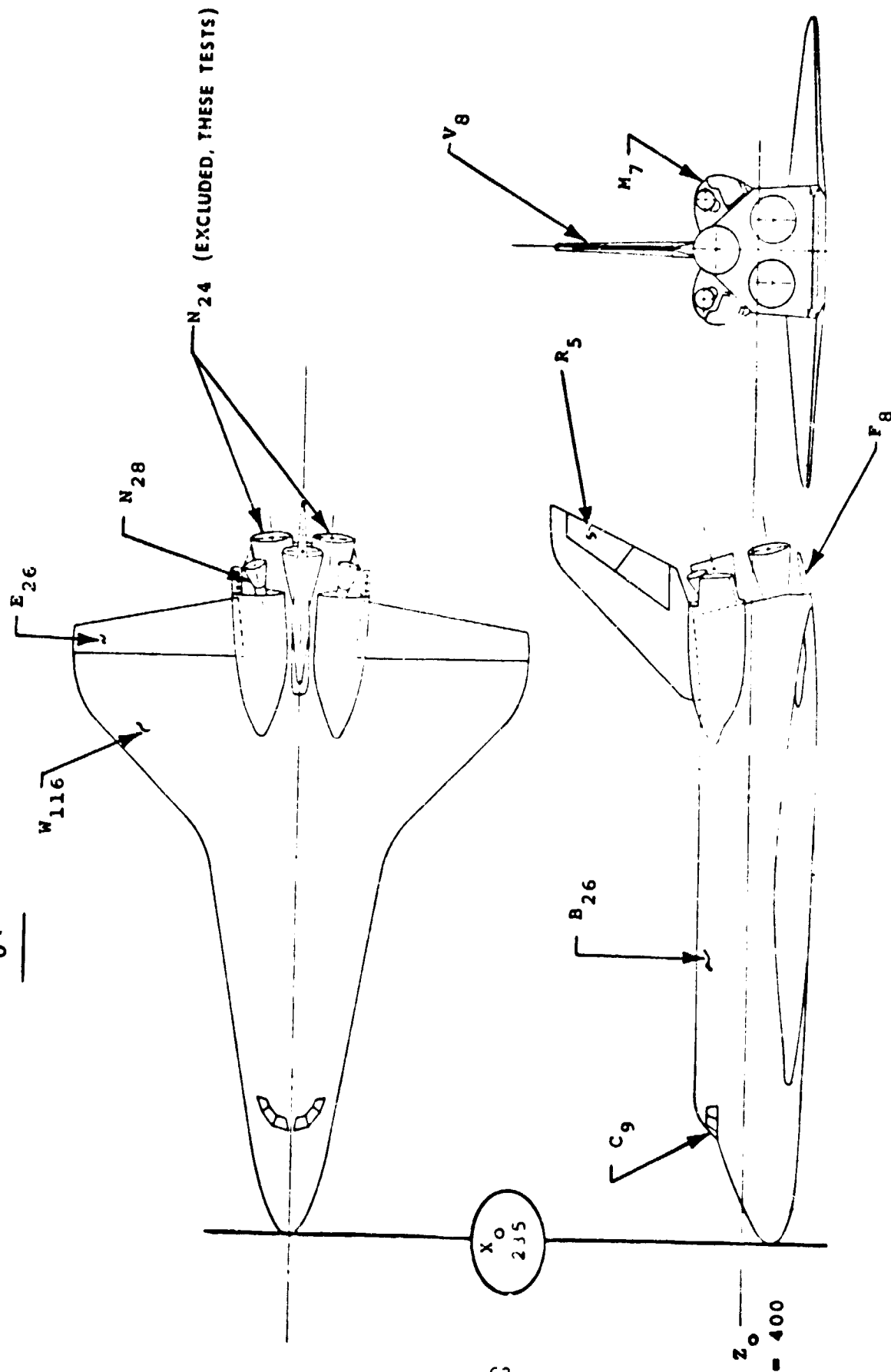
ALL DIMENSIONS IN INCHES
 FULL SCALE



g. SSV orbiter configuration 140A/B

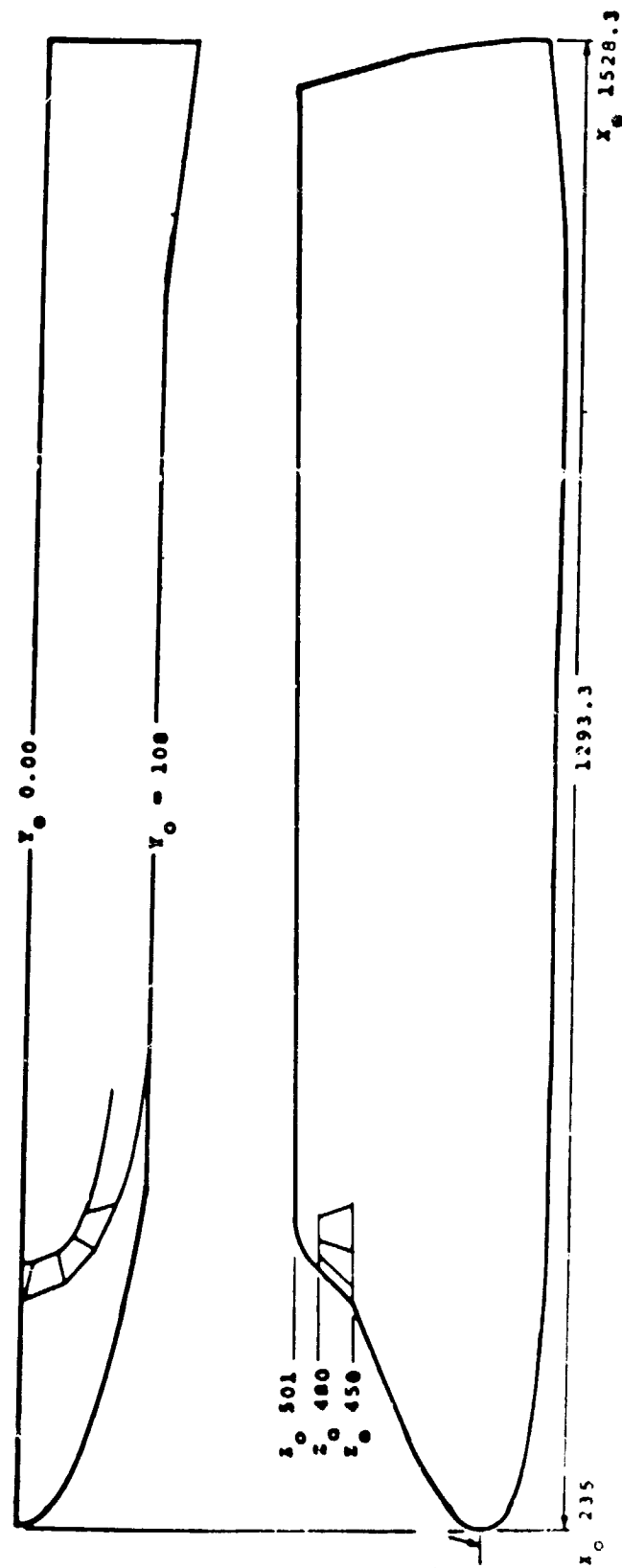
Figure 2. - Continued

01



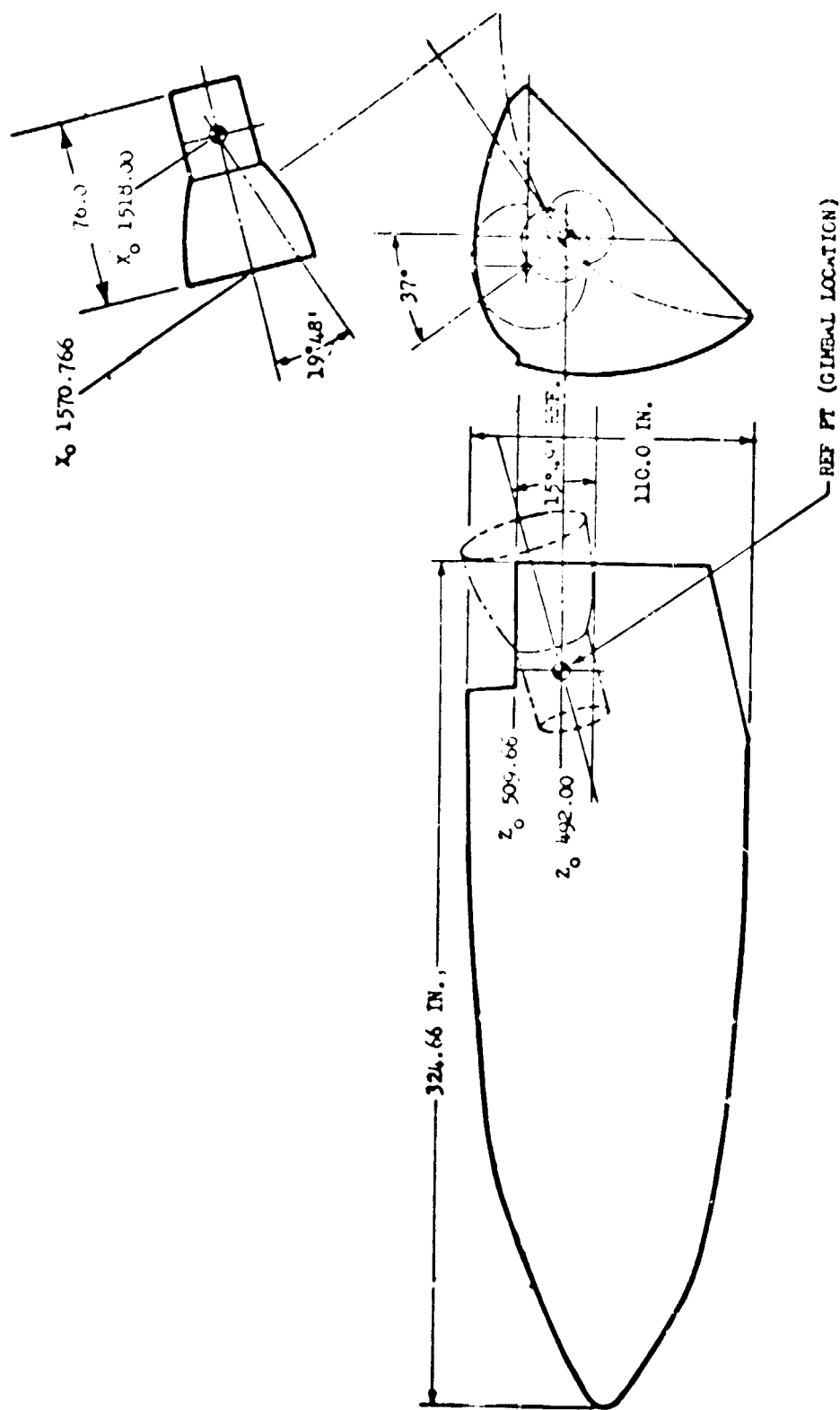
h. Orbiter nomenclature

Figure 2. - Continued



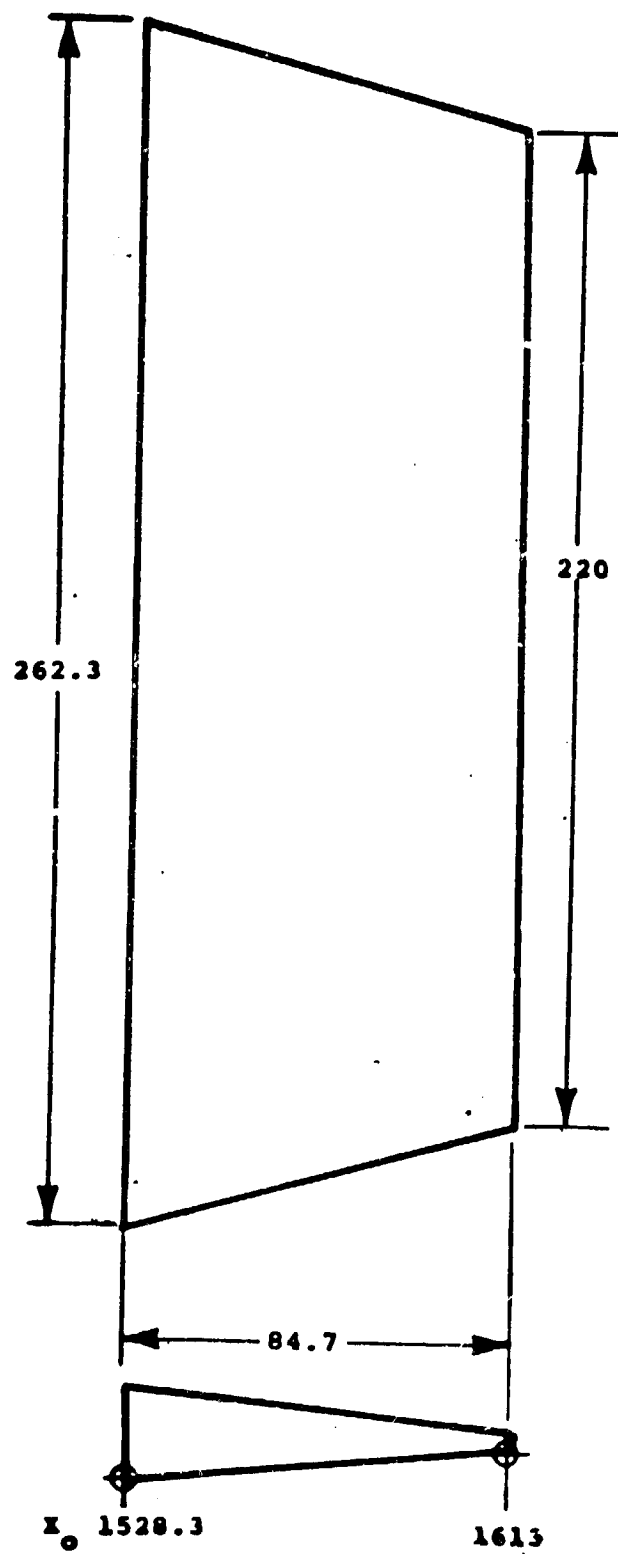
i. Canopy, Cg. and body, B₂₆, lines drawing VL70-00193 and VL70-000140A/B

Figure 2. - Continued

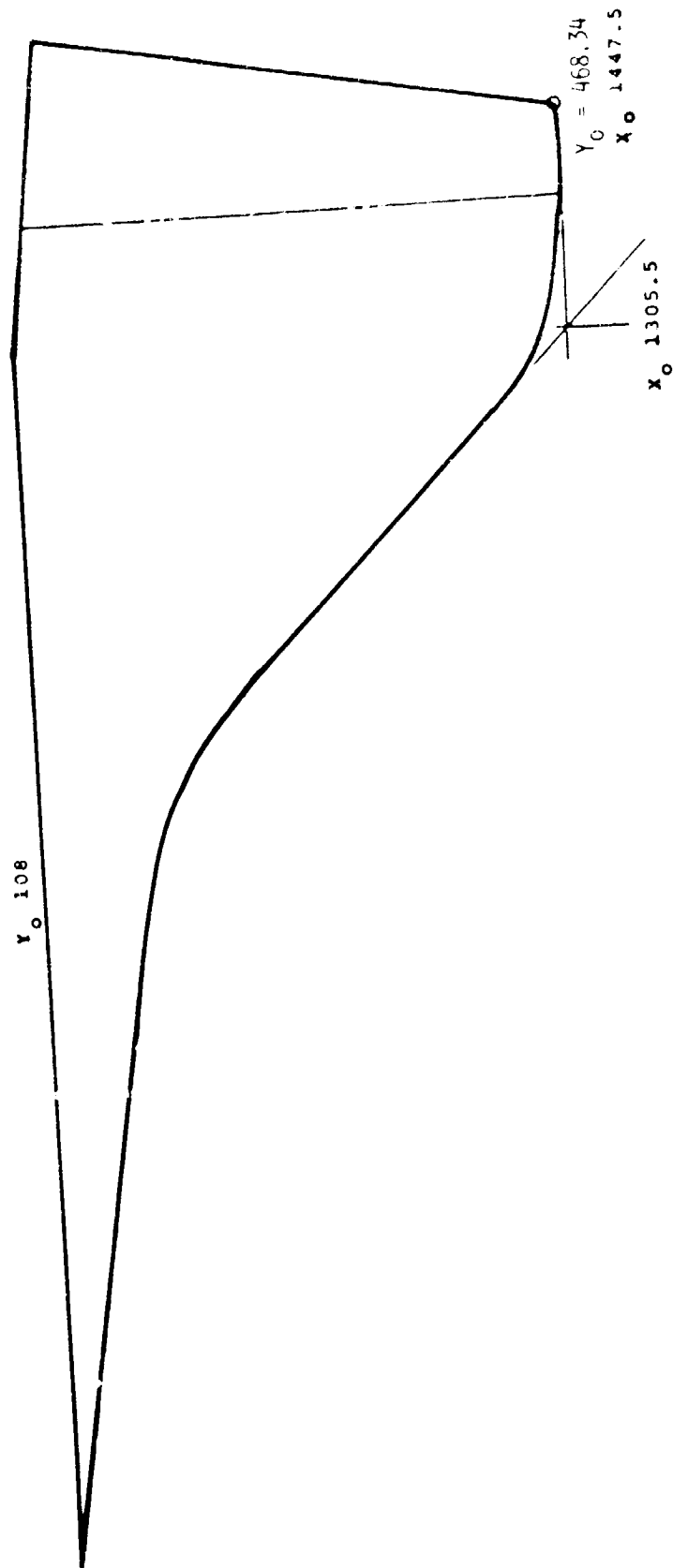


j. M7 - OMS Pod

Figure 2. - Continued

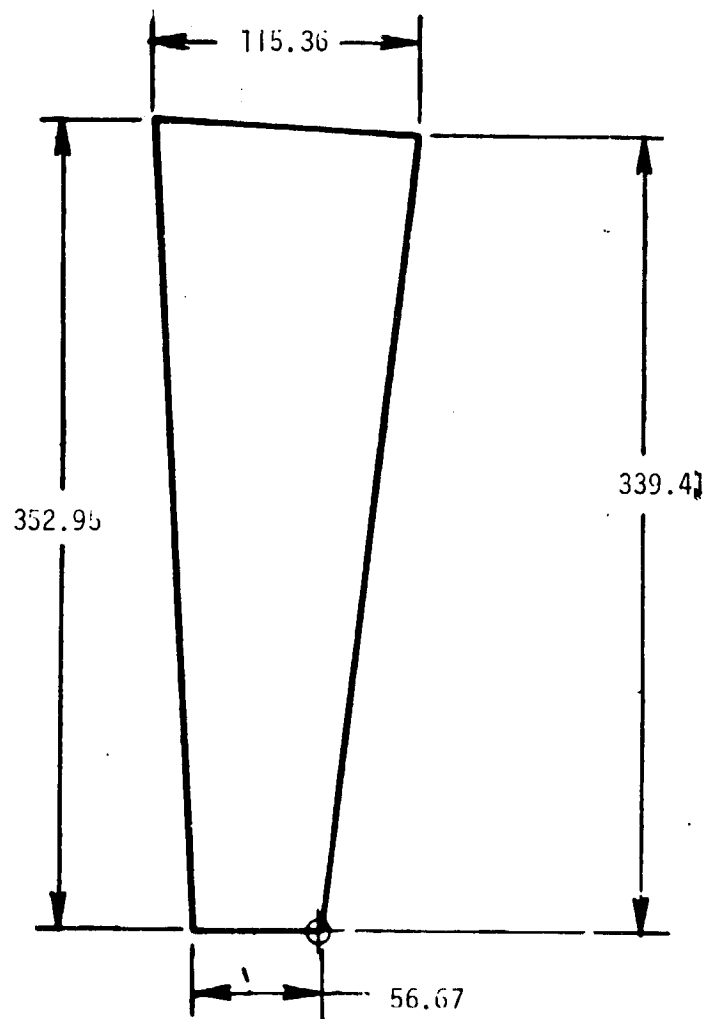


k. Body flap, F_g , lines drawing no. VL70-000140A/B
Figure 2. - Continued



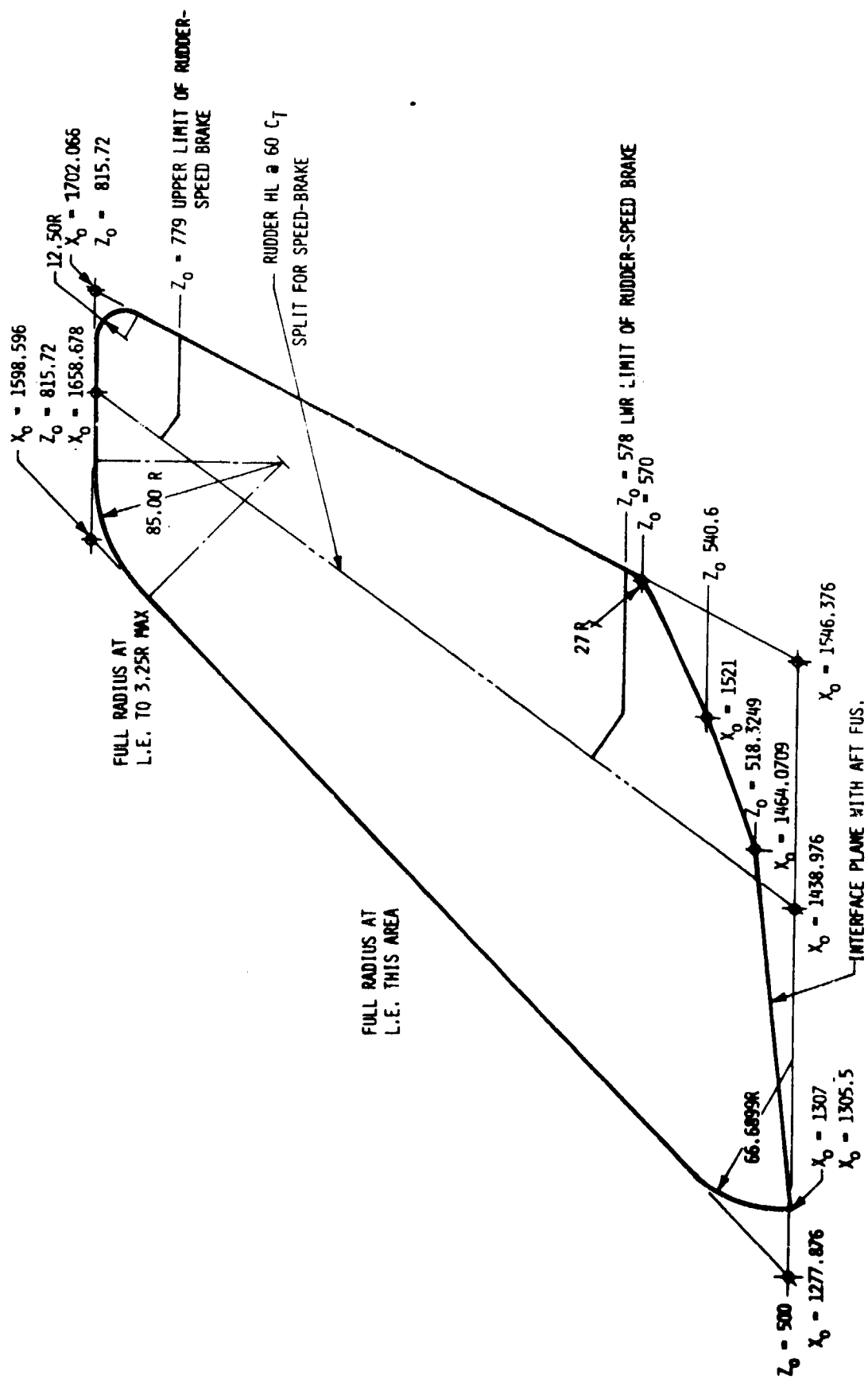
1. Wing, W₁₁₆, lines drawing no. VL70-000200

Figure 2. - Continued



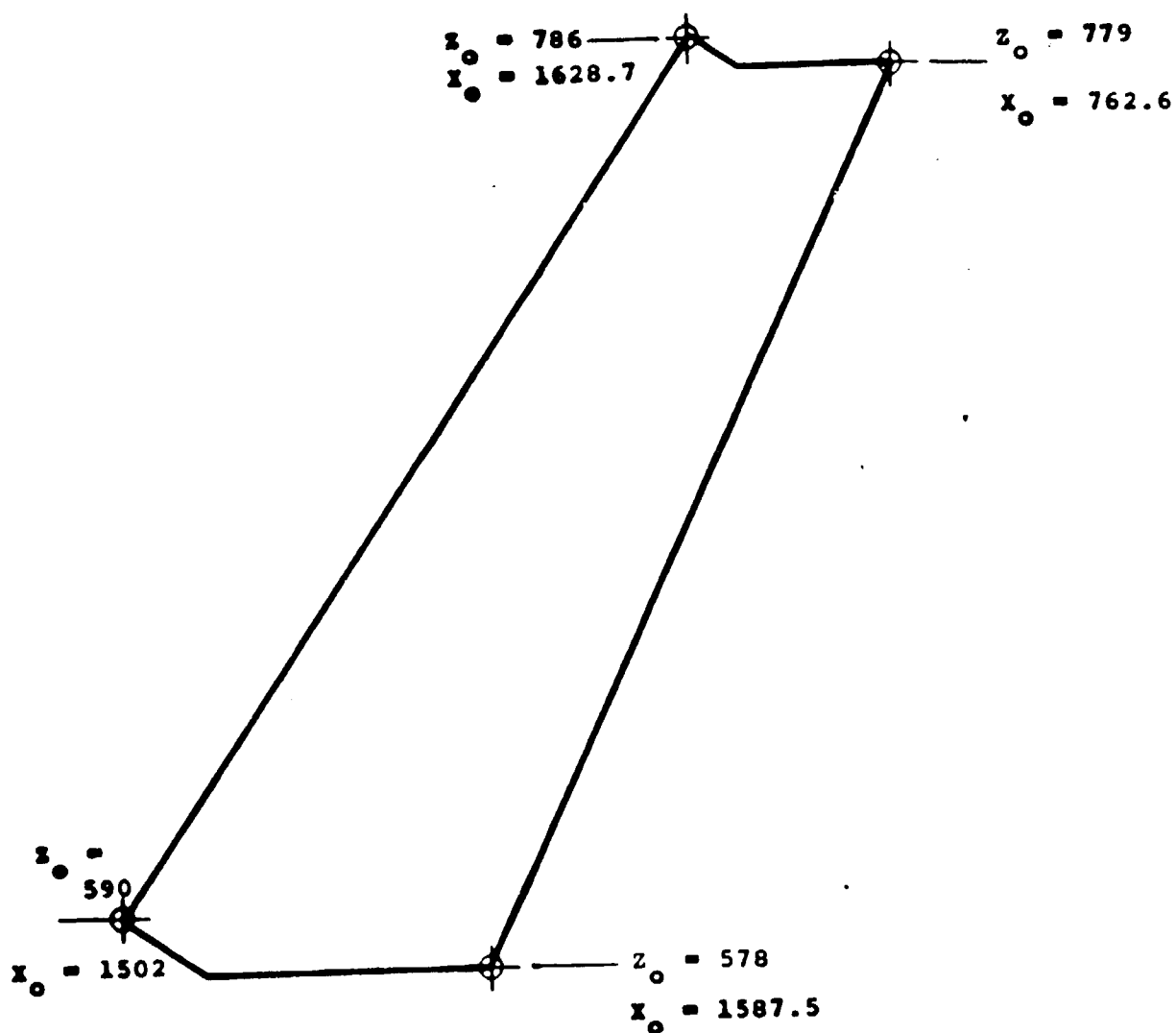
m. Elevon, E₂₆, lines drawing no. VL70-000200, VL70-000140A/B

Figure 2. - Continued



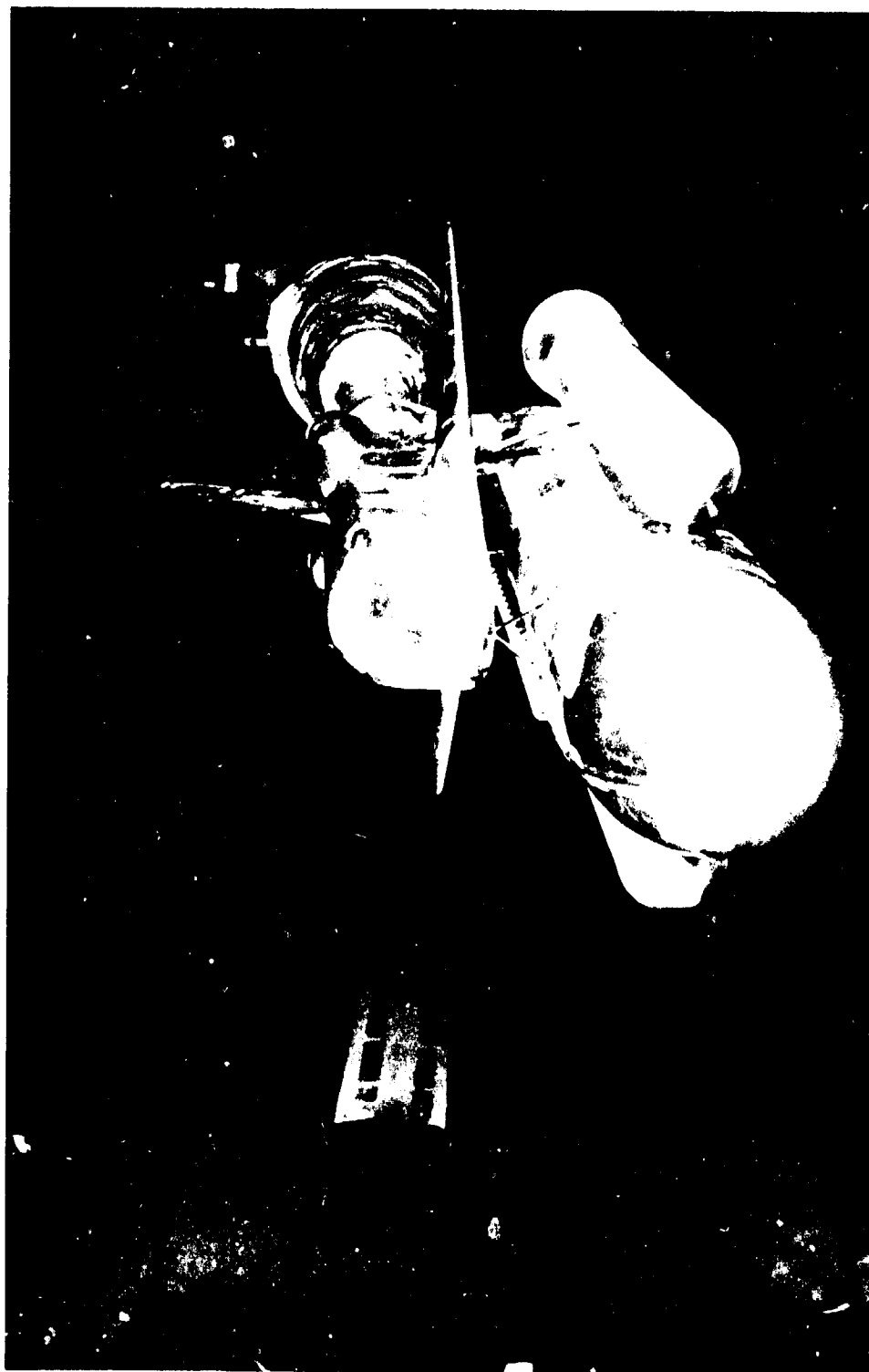
n. Vertical tail, V_8 , and rudder, R_5 , lines drawing no. VL70-000146A

Figure 2. - Continued



o. Rudder, R₅, lines drawing no. VL70-000095

Figure 2. - Concluded



a. Front view of model installed in tunnel

Figure 3. - Model photographs.



b. Rear view of model installed in tunnel

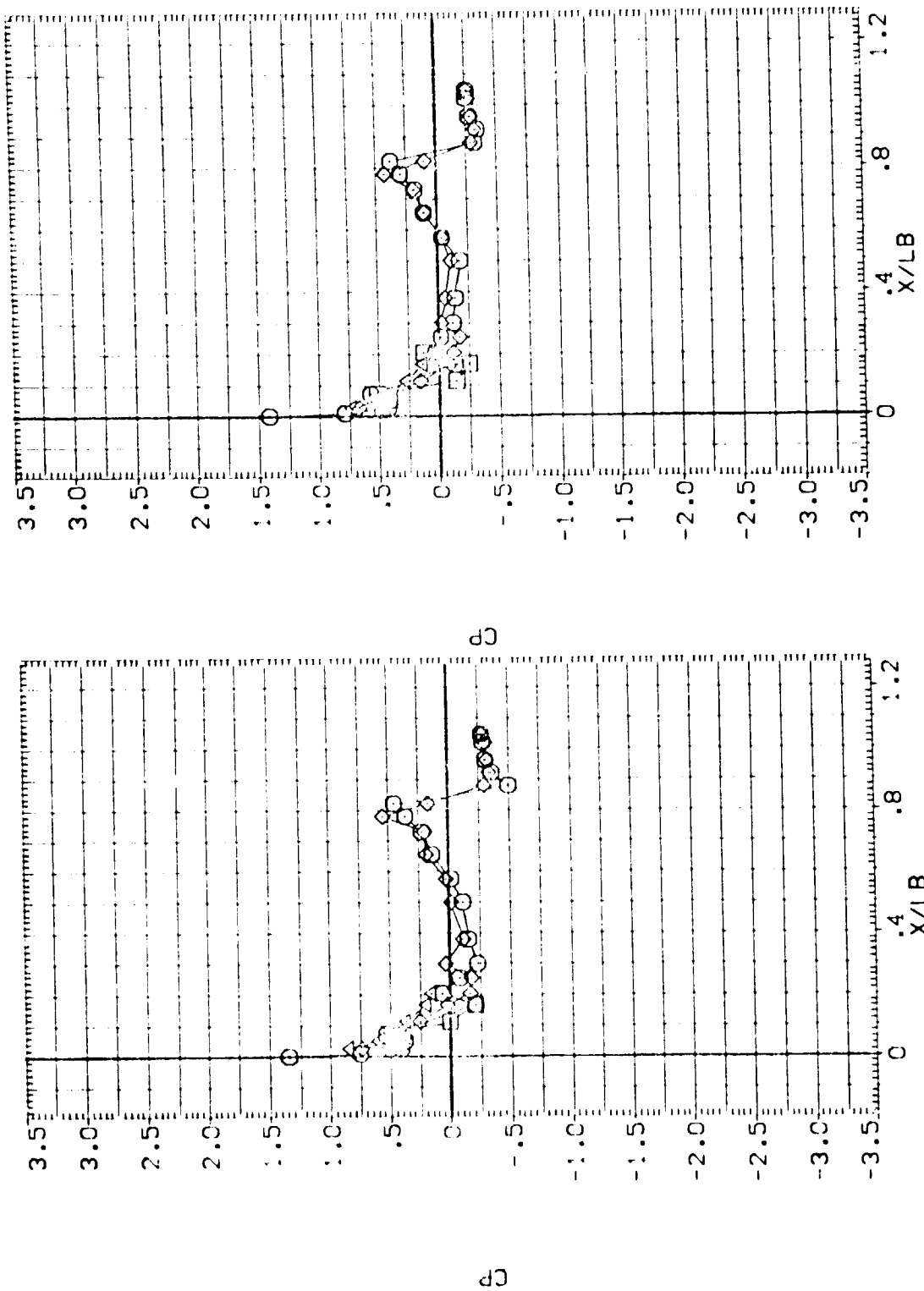
Figure 3. - Concluded.

DATA FIGURES

Note: Correspondence between parameter values and plot grids (multiple grids per page) - first parameter value is presented on left hand grid.

ARC:11-716 1A14 01+112+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETA	ALPHA	MACH	PARAMETRIC VALUES
○	.000	-7.960	-8.240	RUDDER	1.250
◇	20.000	-3.980			.000
△	40.000				ELEVON
□	55.000				SPDBRK
					.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL

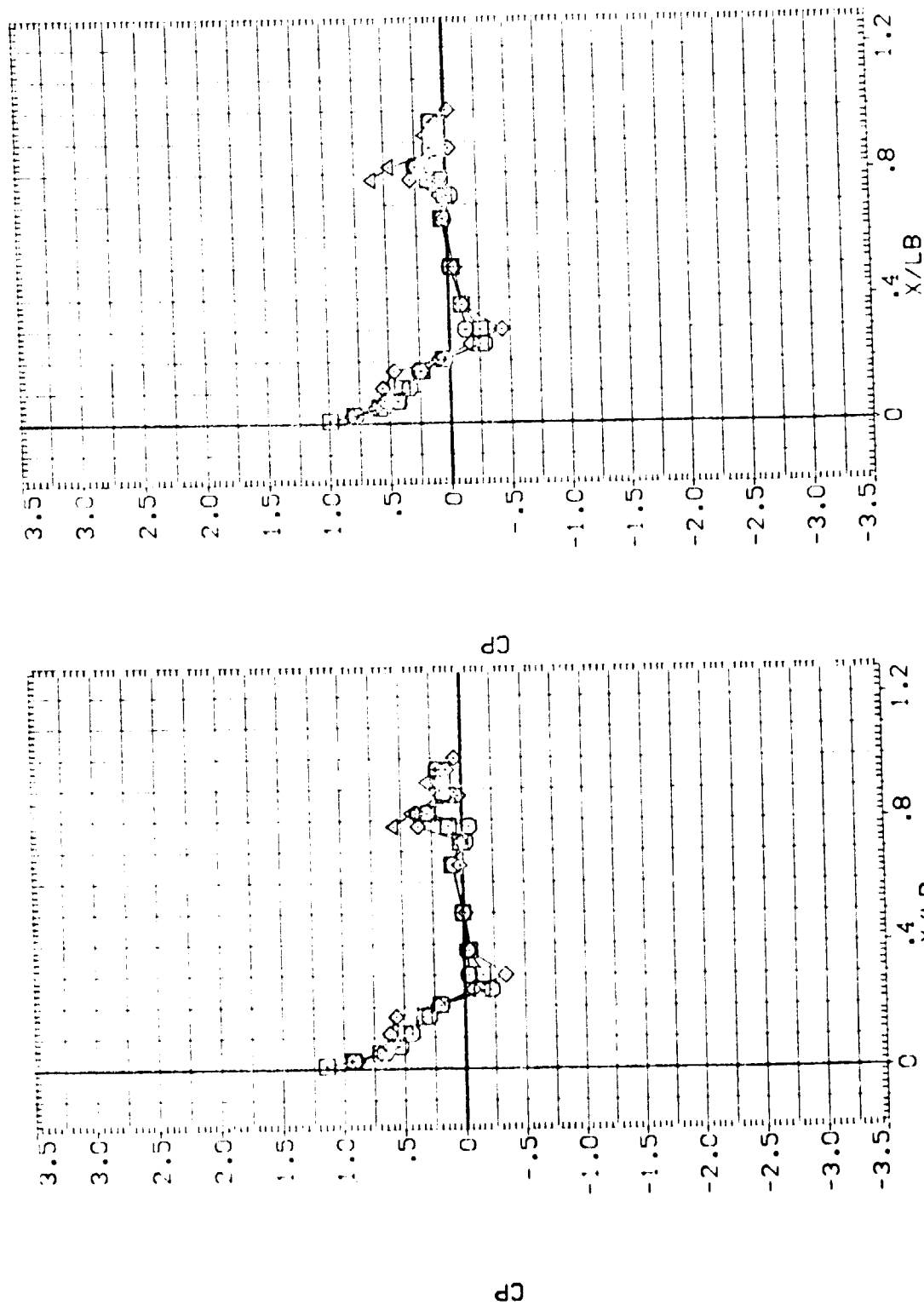
70.000
90.000
120.000
150.000

BETA0
-7.960
-3.980

ALPHA0
-8.240

MACH
RUDDER

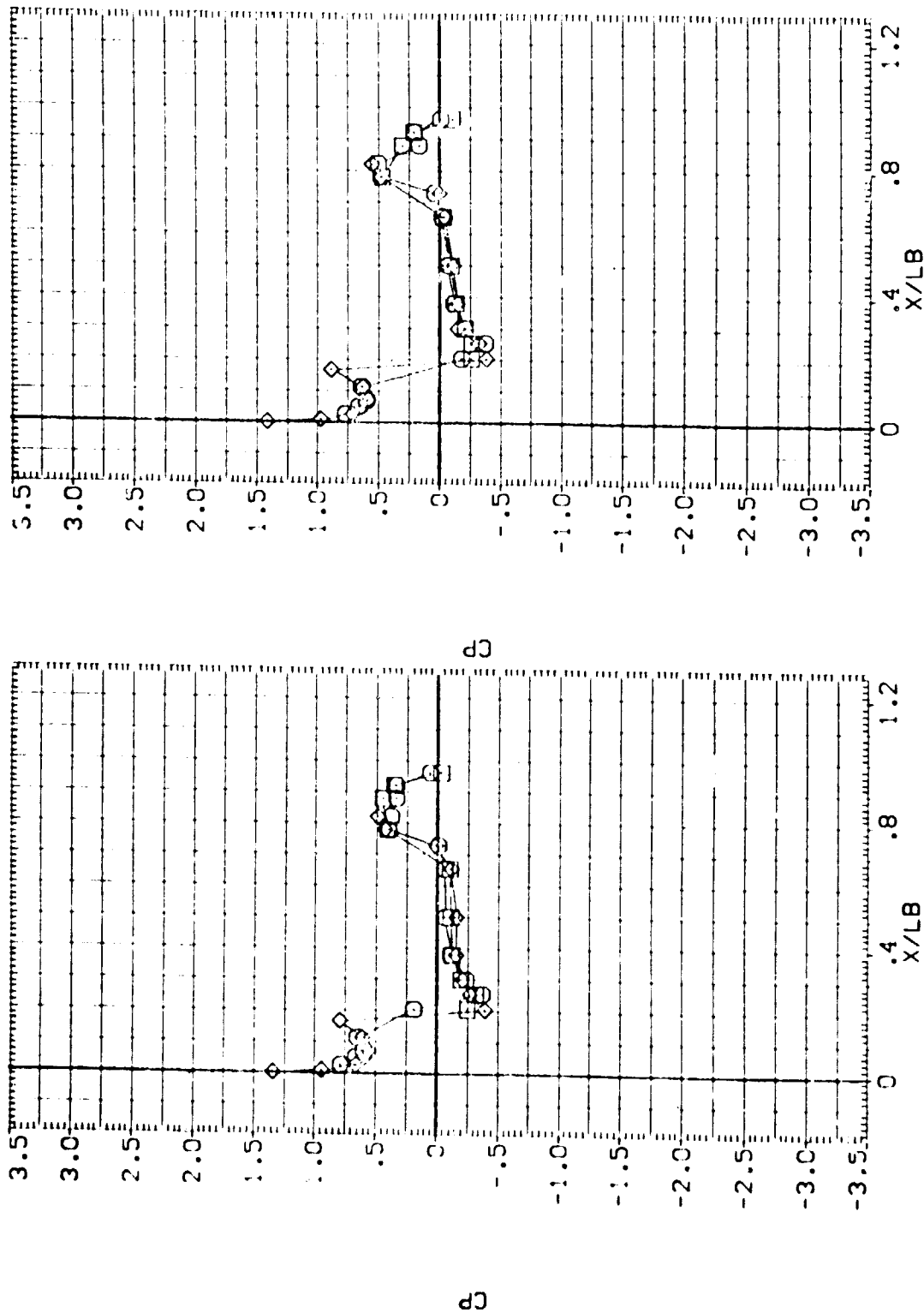
PARAMETRIC VALUES
1.250 ELEVON
.000 SPOILER



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETAC	ALPHAB	PARAMETRIC VALUES		
○	150.000	-7.960	-8.240	MACH	1.250	ELEVON
—	165.000	-3.980		RUDDER	.000	SPDRK
◇	180.000					.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-016 [A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)]

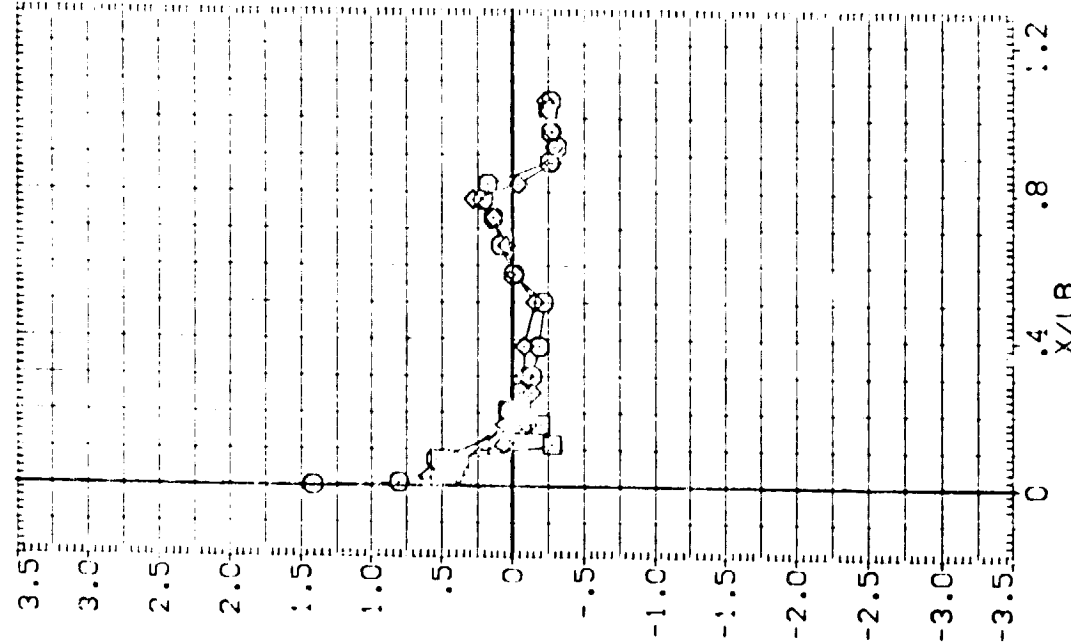
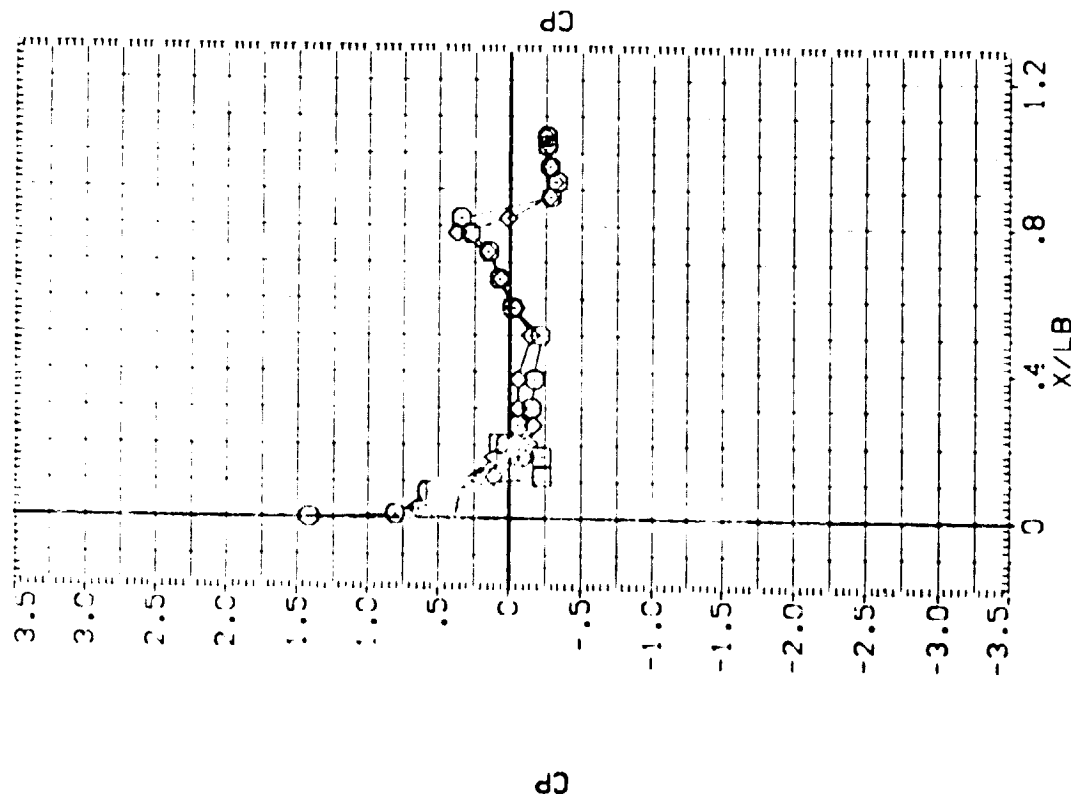
SYMBOL

PHI
0.000
20.000
40.000
55.000

BETA0
-1.990
0.010

ALPHA0
-8.250

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOBRK .000



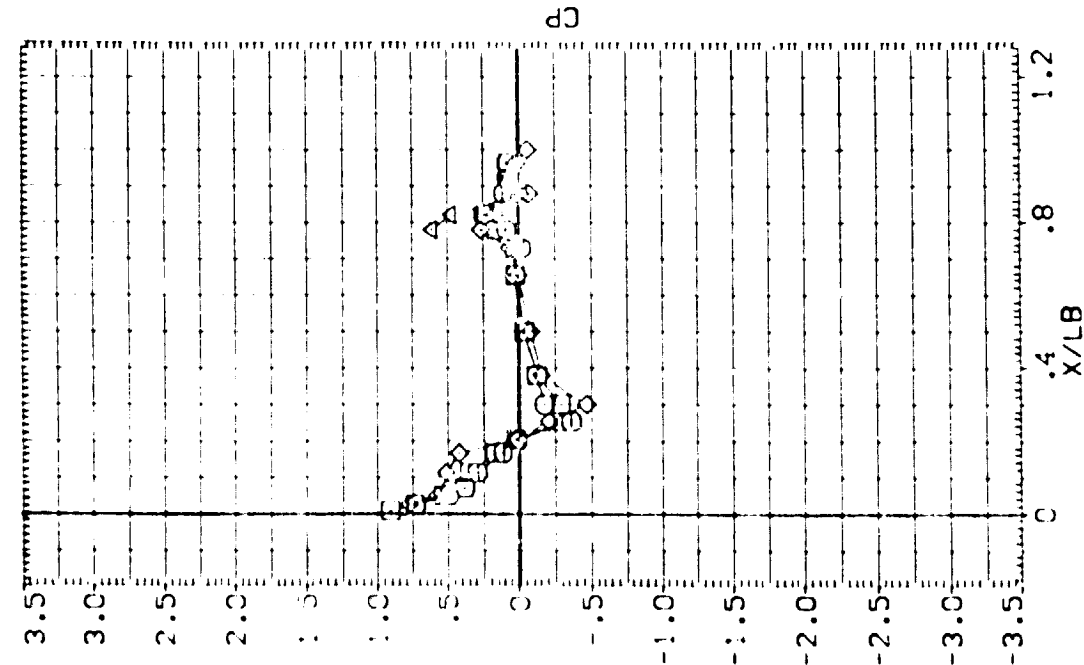
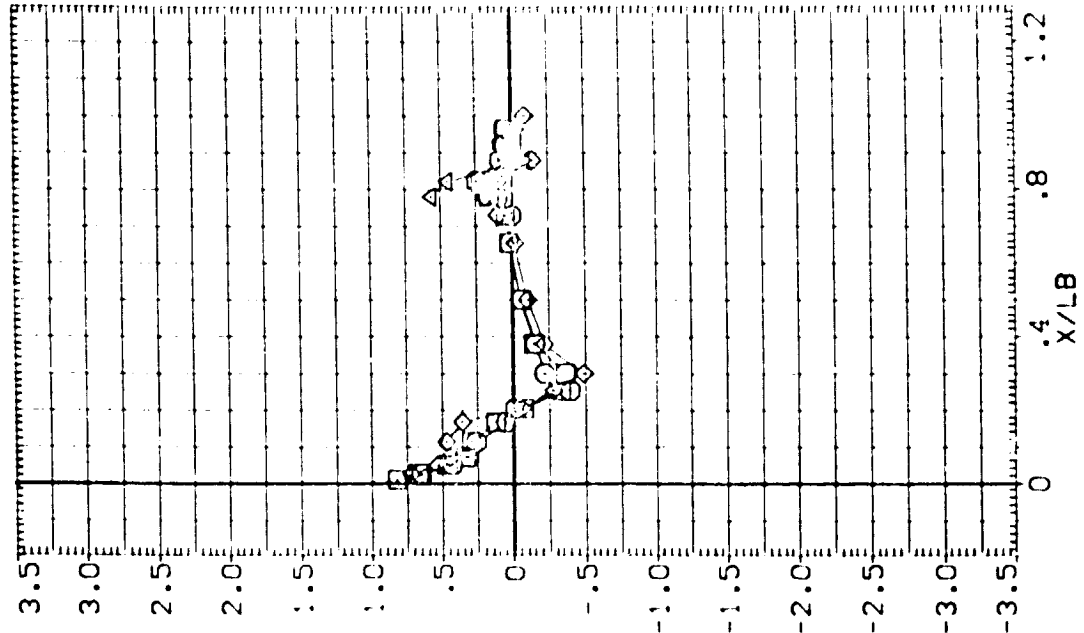
LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC: 016 1A14 01+T12+S12N25+AT10 3RB. FUSELAGE (RB1B33)

PARAMETRIC VALUES
 MACH 1.250 ELEVATION .000
 RUDDER .000 SPOILER .000

SYMBOL
 70.000
 90.000
 120.000
 135.000

PHI
 BETAS
 ALPHA
 -8.250
 .010



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:-7.16 IA14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

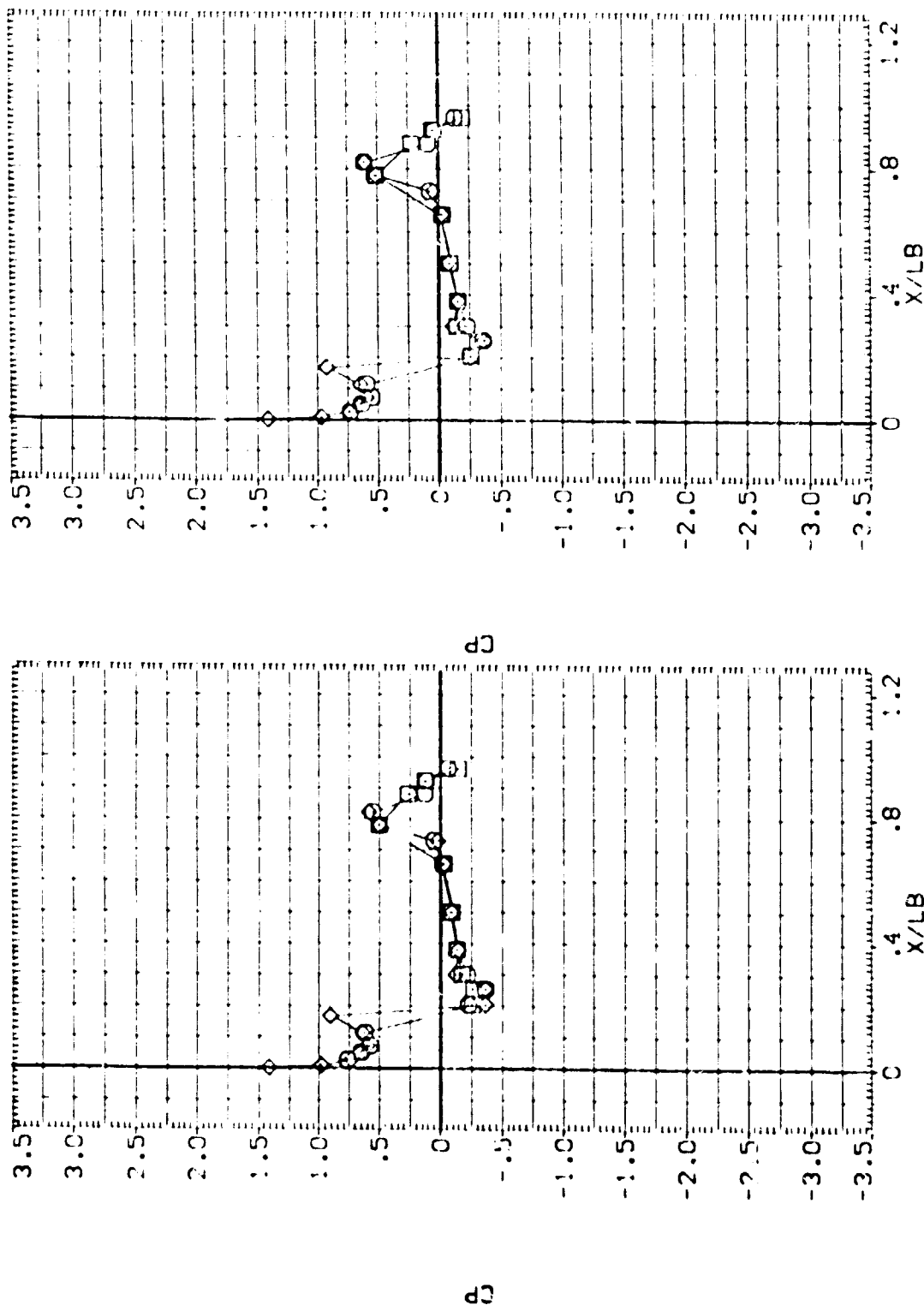
SYMBOL

PHI 150.000
165.000
180.000

BETA0 -1.950
ALPHA0 -8.250
0.00

PARAMETRIC VALUES

MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

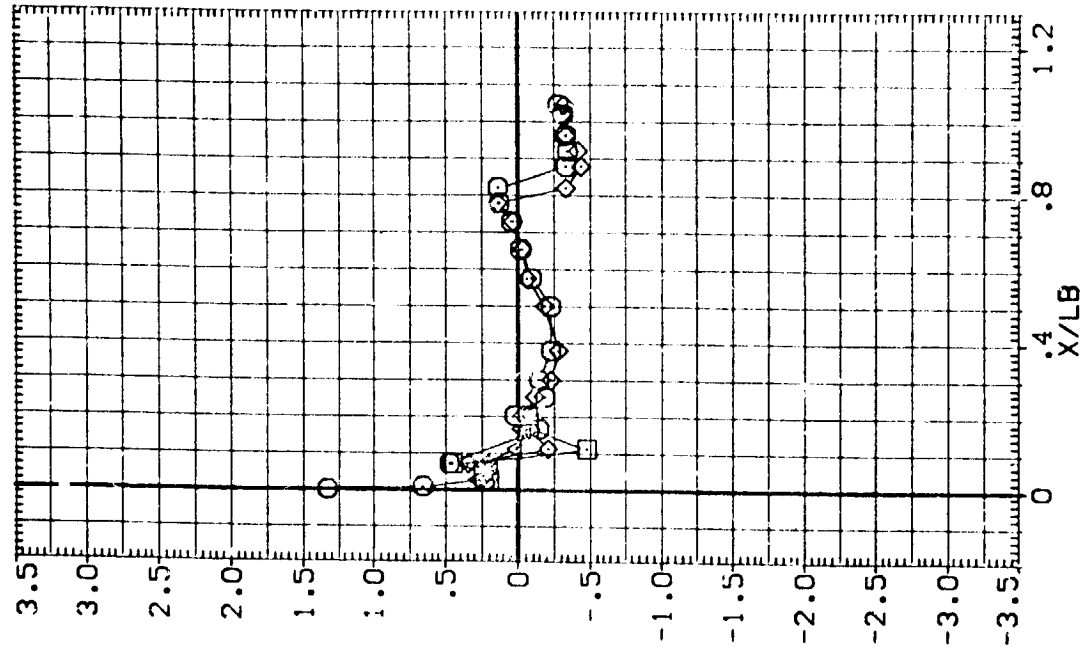
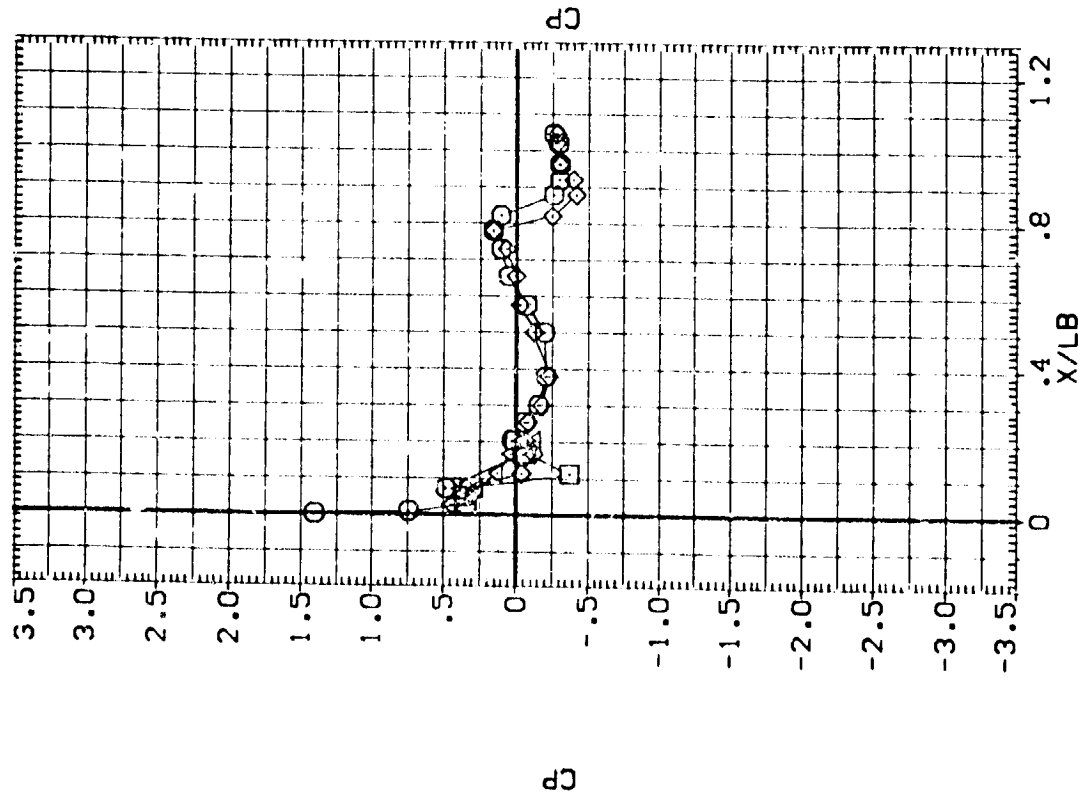
SYMBOL
 ○ □ ◇ △

PHI
 .000
 20.000
 40.000
 55.000

ETA0
 4.040
 8.100

ALPHA0
 -8.230

PARAMETRIC VALUES
 MACH 1.000
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL

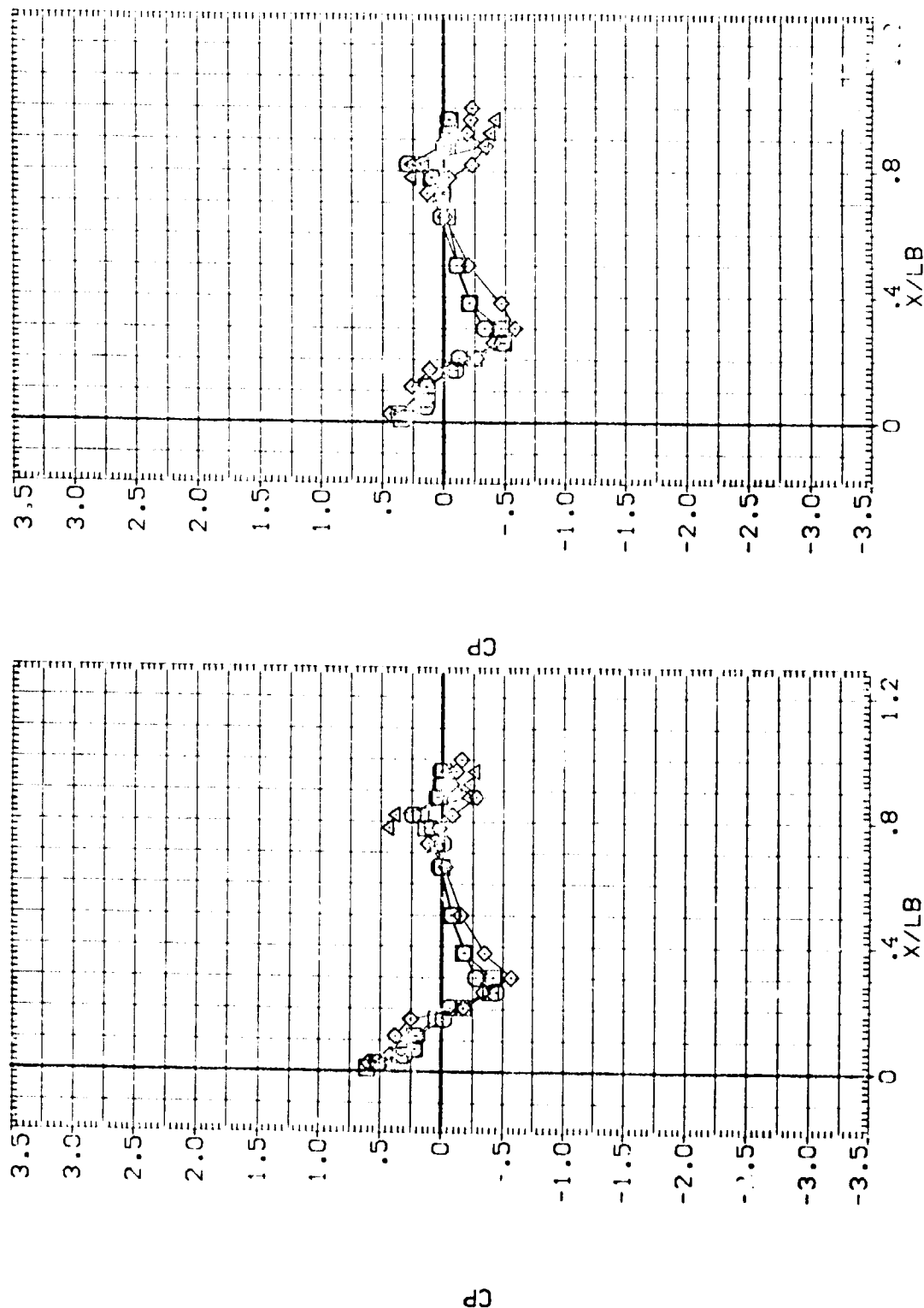
PHI 70.000
90.000
120.000
135.000

BETA0 4.040
8.100

ALPHA0 -8.230

MACH 1.250
RUDDER .000
ELEVON .000
SPOILER .000

PARAMETRIC VALUES



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:1-7:6 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (R31B33)

SYMBOL
 O
 I
 ◇

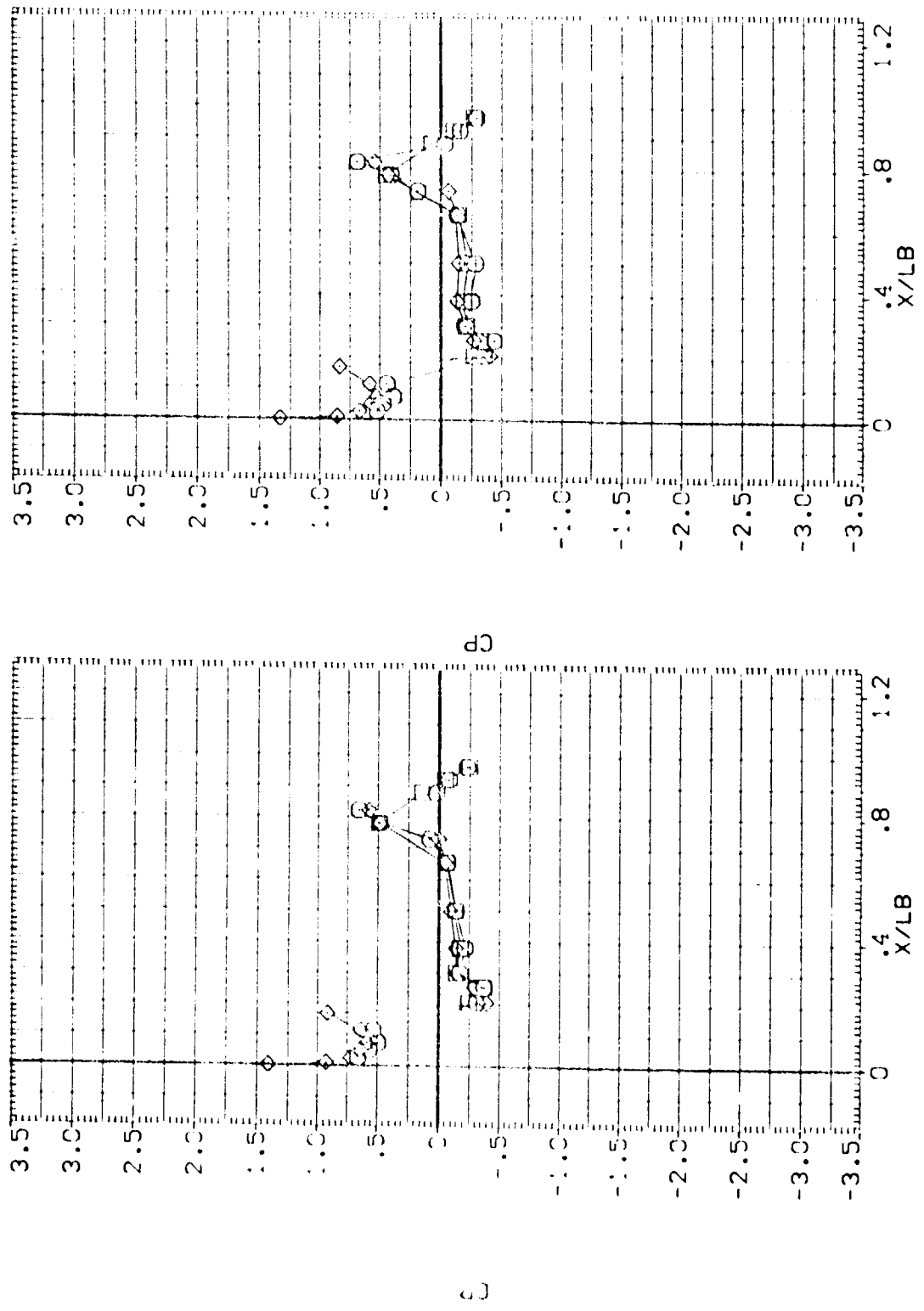
PHI
 150.000
 155.000
 160.000

BETAG
 4.040
 8.100

ALPHA
 -8.230

MACH
 RUDDER

PARAMETRIC VALUES
 1.250
 .000
 ELEVON
 SPOBRK
 .000
 .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 CRB. FUSELAGE (RB1B33)

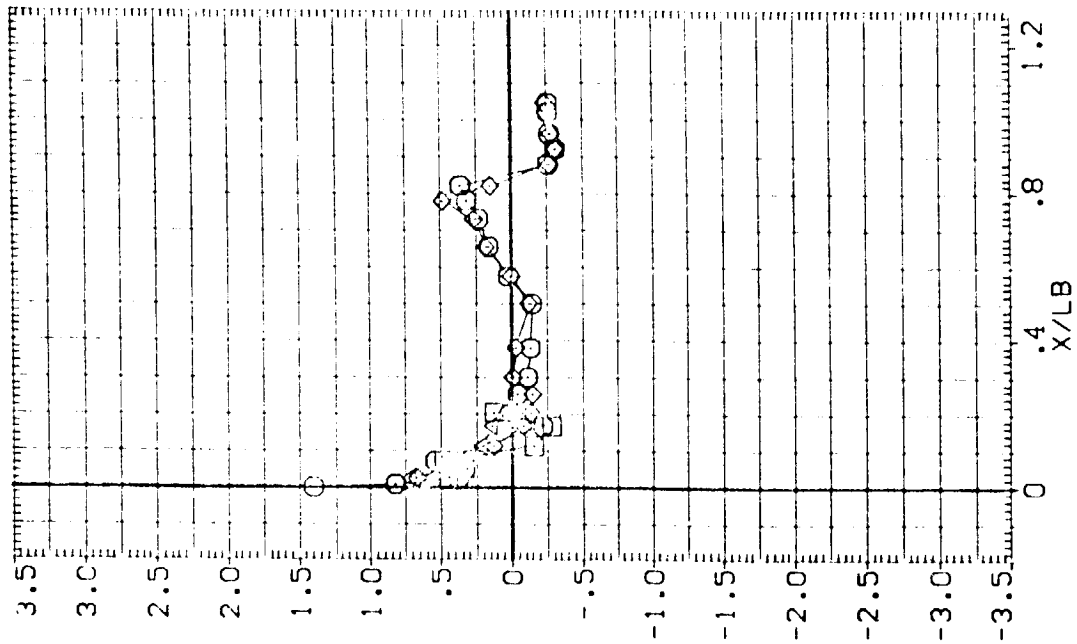
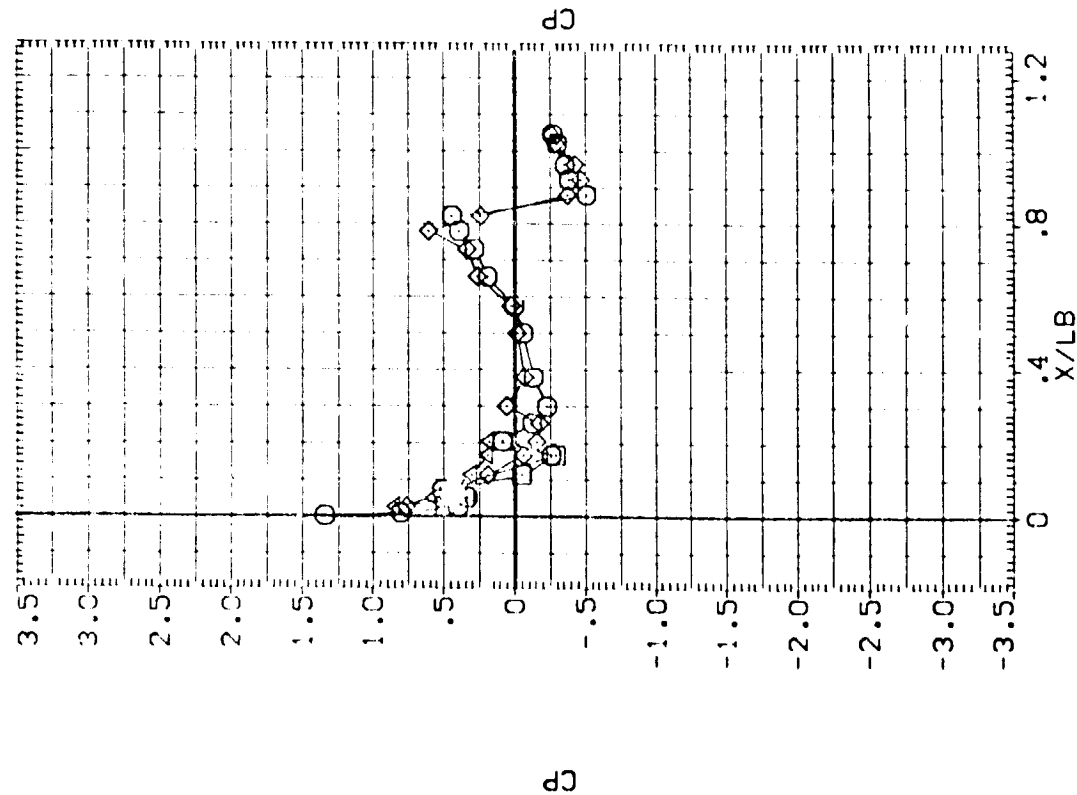
SYMBOL
○ □ △

PHI .000
20.000
40.000
55.000

BETA0 -7.990
-3.950

ALPHA0 -4.230

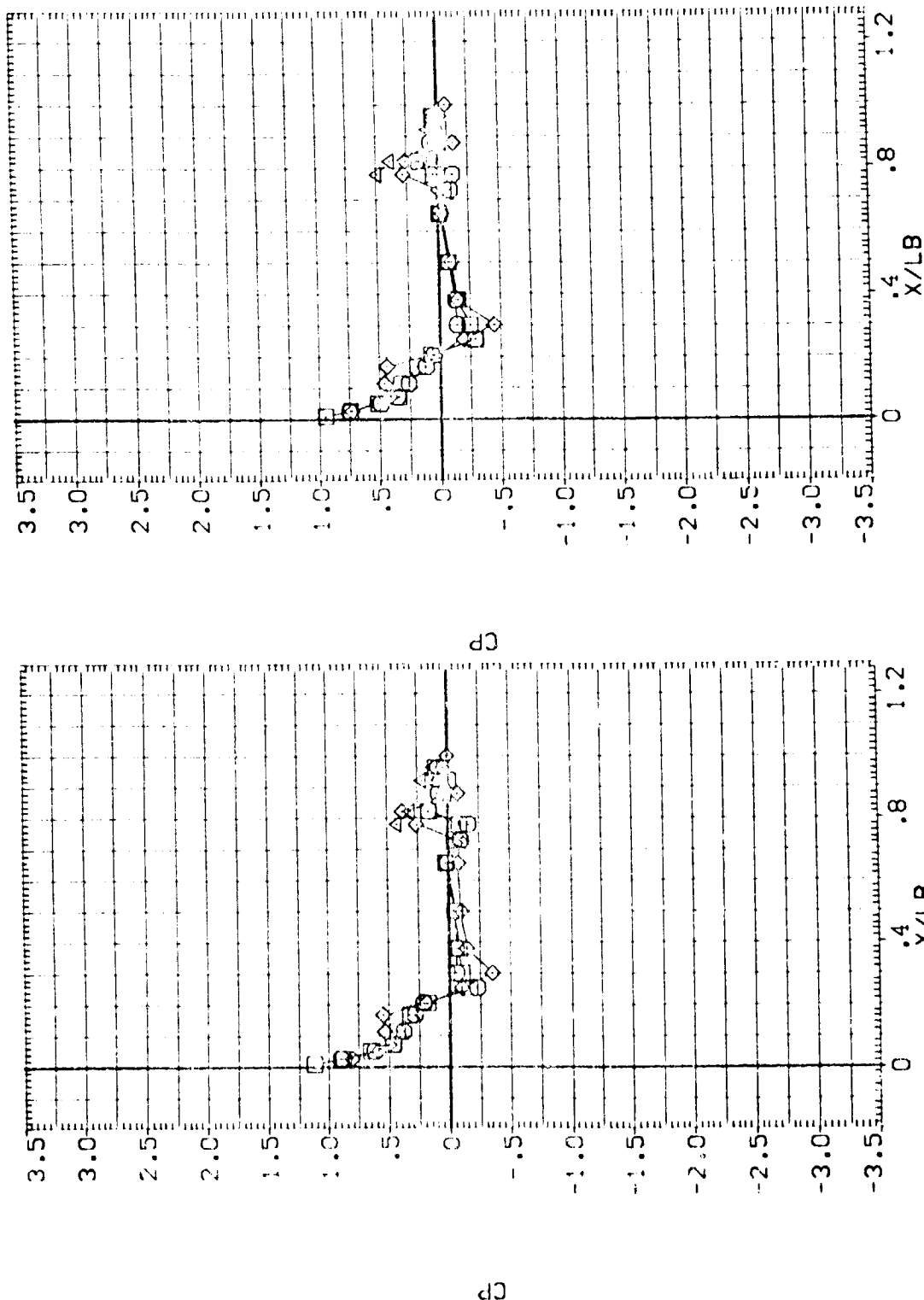
PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	SPDRK
○	70.000	-7.990	-4.230	1.250	.000	.000
□	90.000	-3.950		.000		
◇	120.000					
△	135.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL

150.000
165.000
180.000

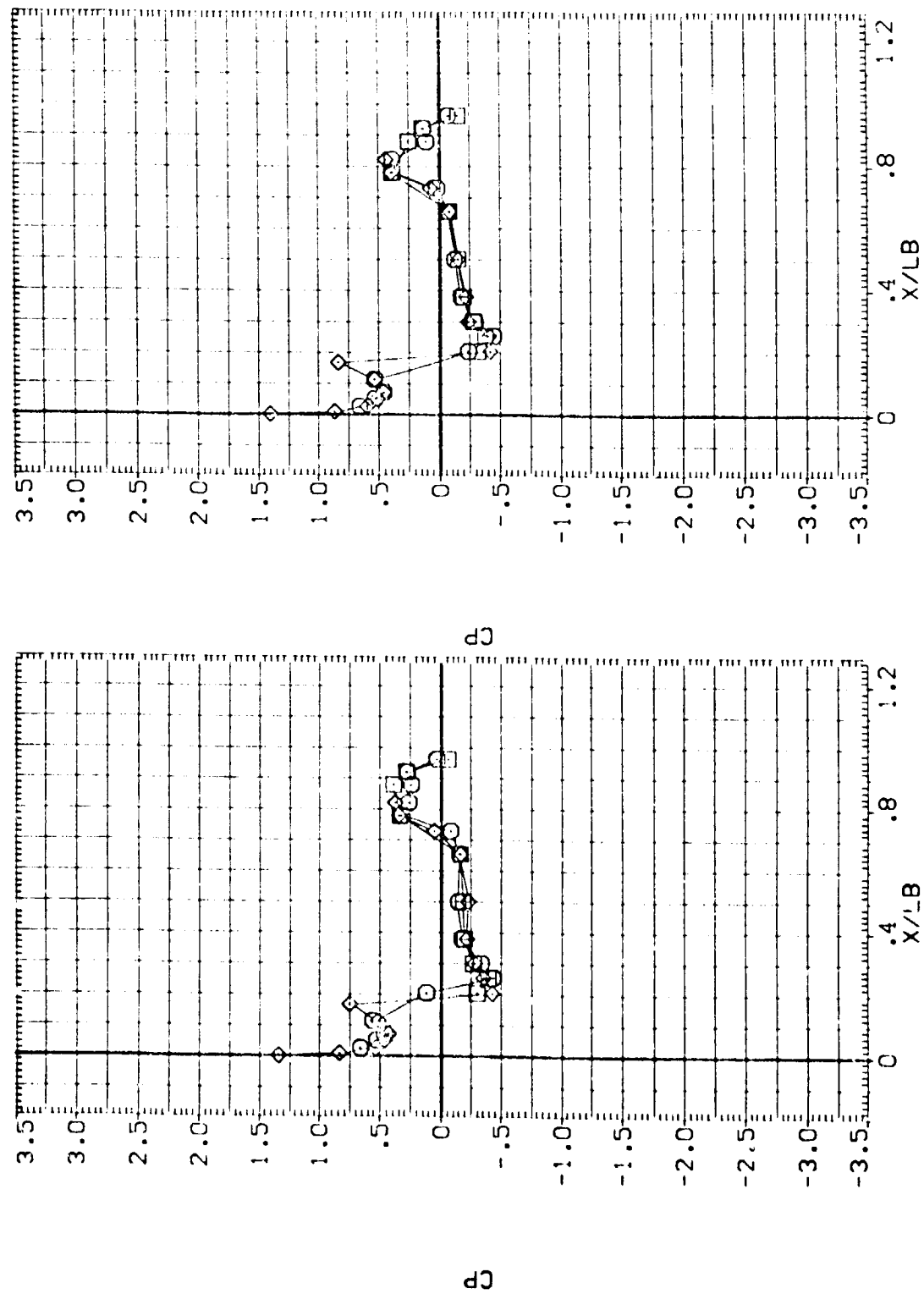
BETA0
-7.950
-3.950

ALPHA0
-4.230

MACH
RUDDER

PARAMETRIC VALUES
1.250
.000

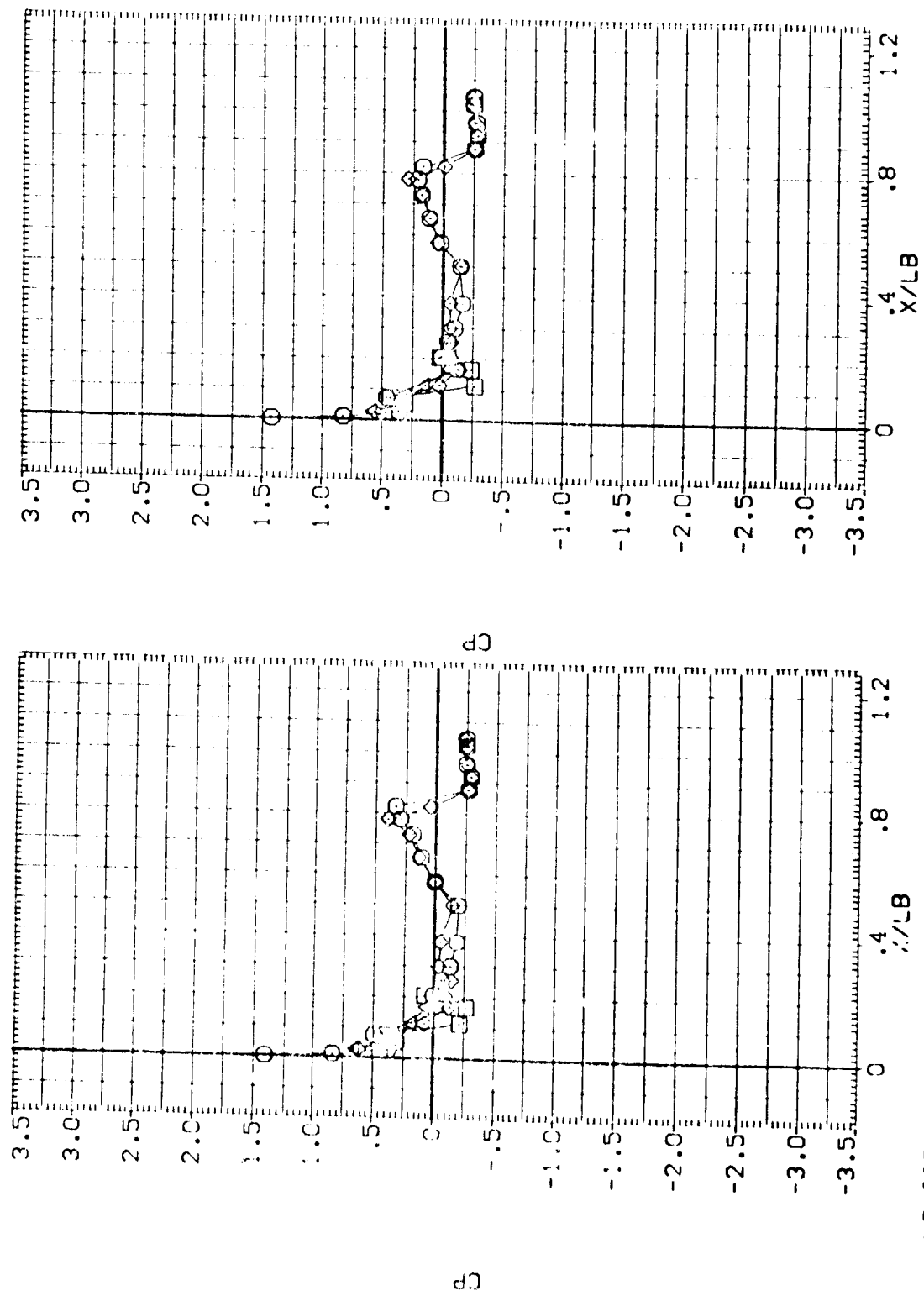
ELEVON
SPOILER
.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01-T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	SPOBRK
○	.000	-2.020	-4.150	1.250	.000	.000
◇	20.000	-1.010				
△	40.000					
	55.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (R91BJ3)

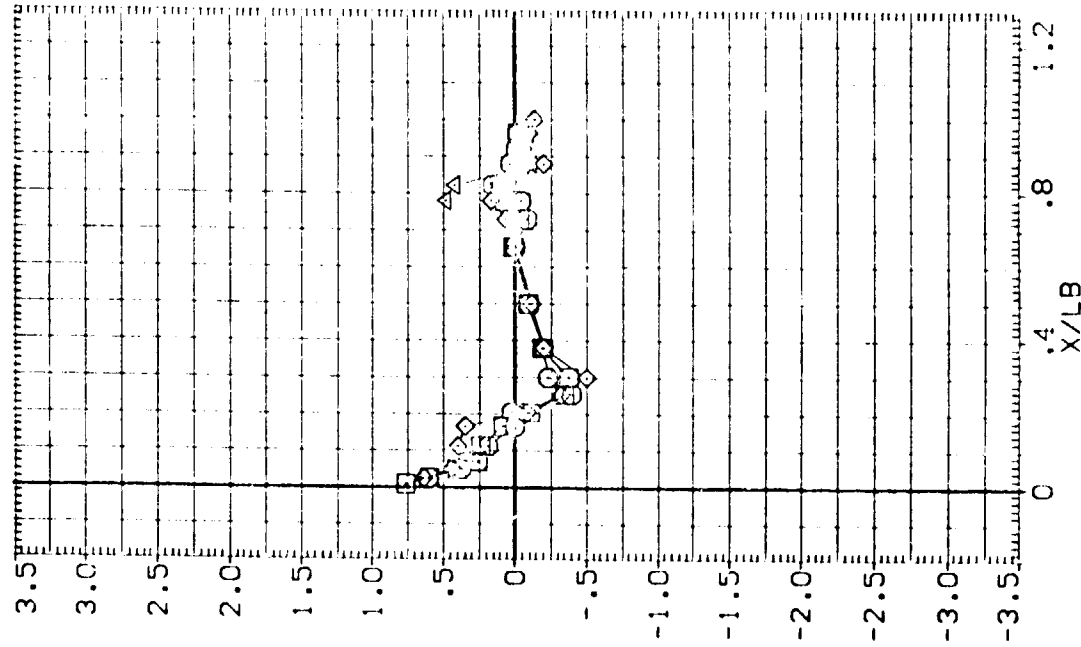
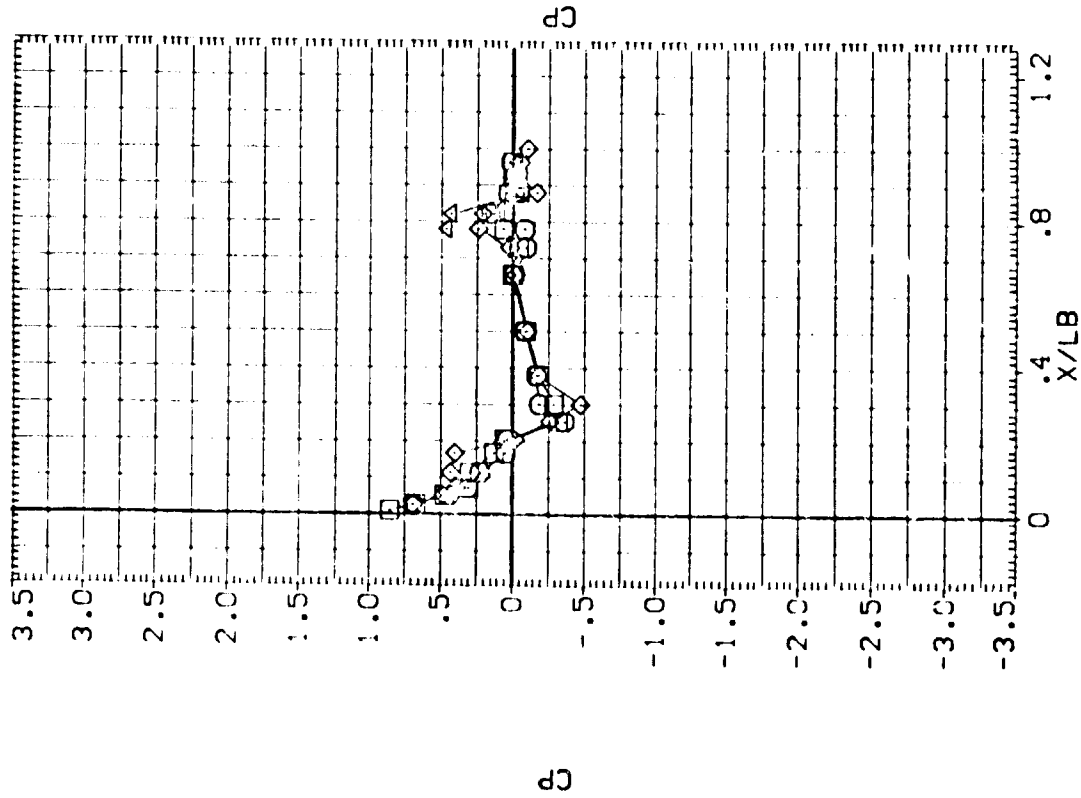
SYMBOL
 O
 ◇
 △

PHI
 70.000
 90.000
 120.000
 135.000

BETA0
 -2.020
 -.010

ALPHA0
 -4.150

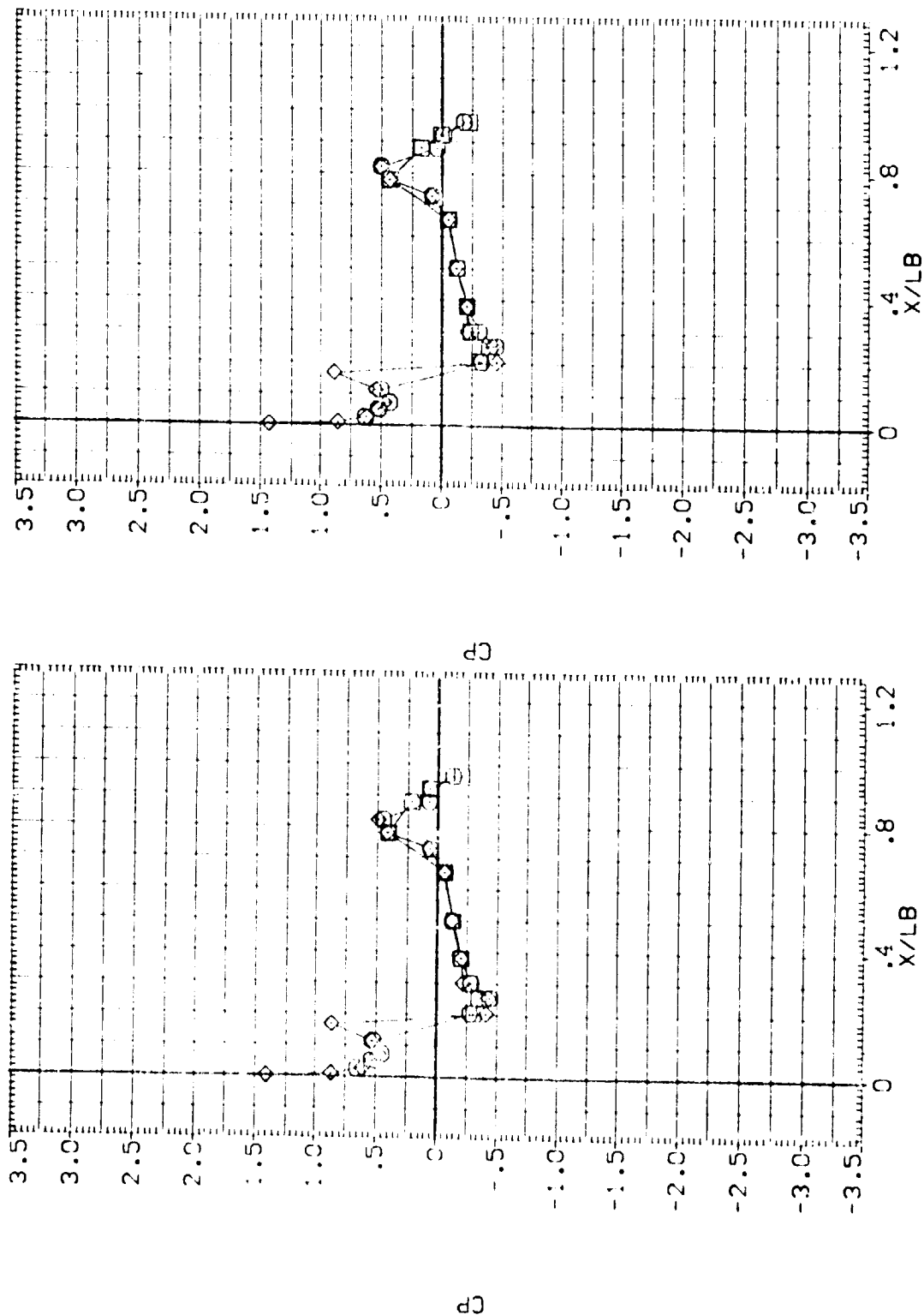
PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETA	ALPHA	MACH	RUDER	PARAMETRIC VALUES
○	150.000	-2.020	-4.150	1.250	.000	ELEVON
□	165.000	-3.010		.000	.000	SPDRK
◇	180.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ORB. FUSELAGE (RB1333)

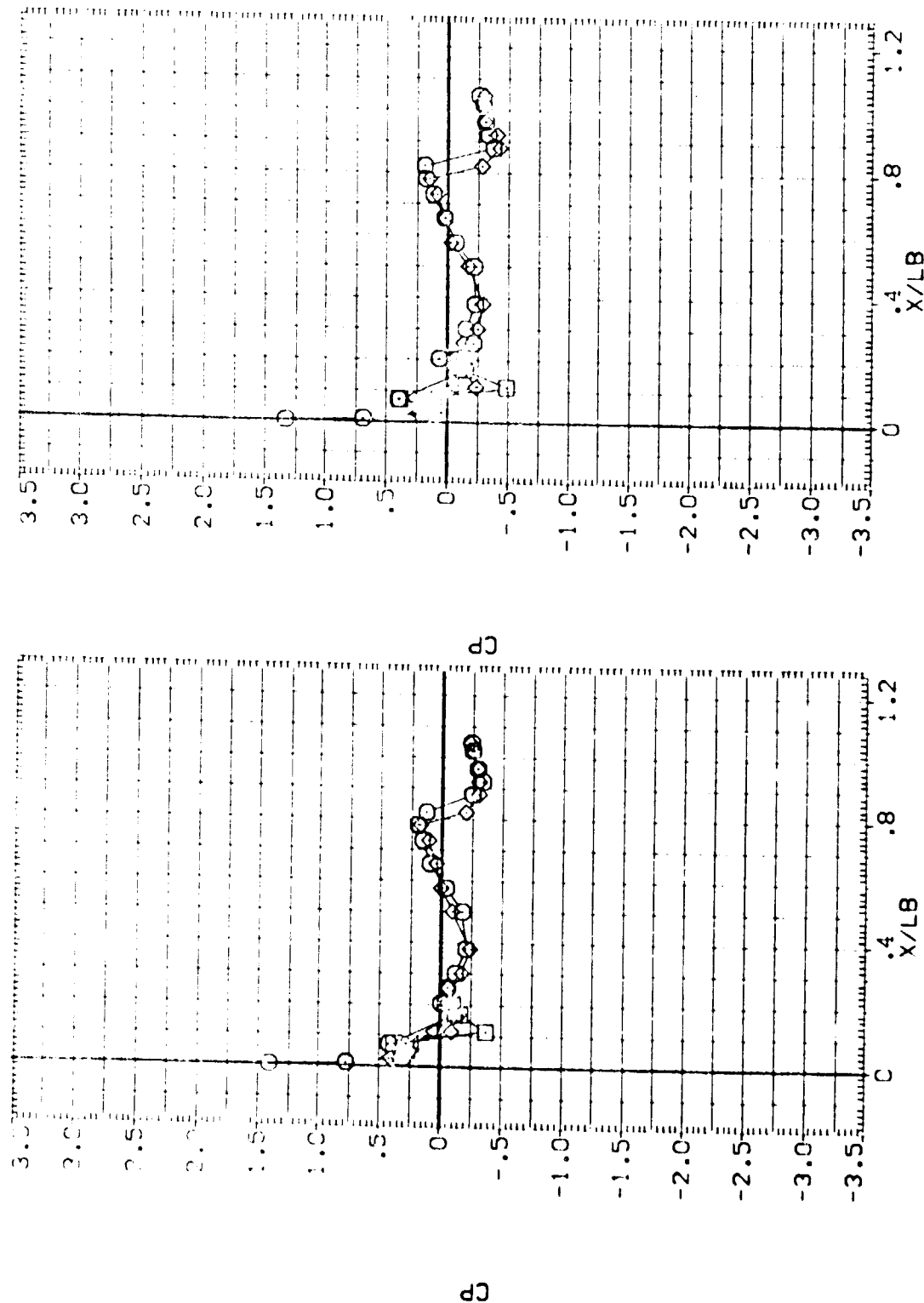
SP-600

PHI .000
20.000
40.000
55.000

BETAC 4.090
8.080

ALPHA0 -4.200

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPDRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL

○ ○ ○ △

PHI

70.000
90.790
120.000
135.000

BETAC

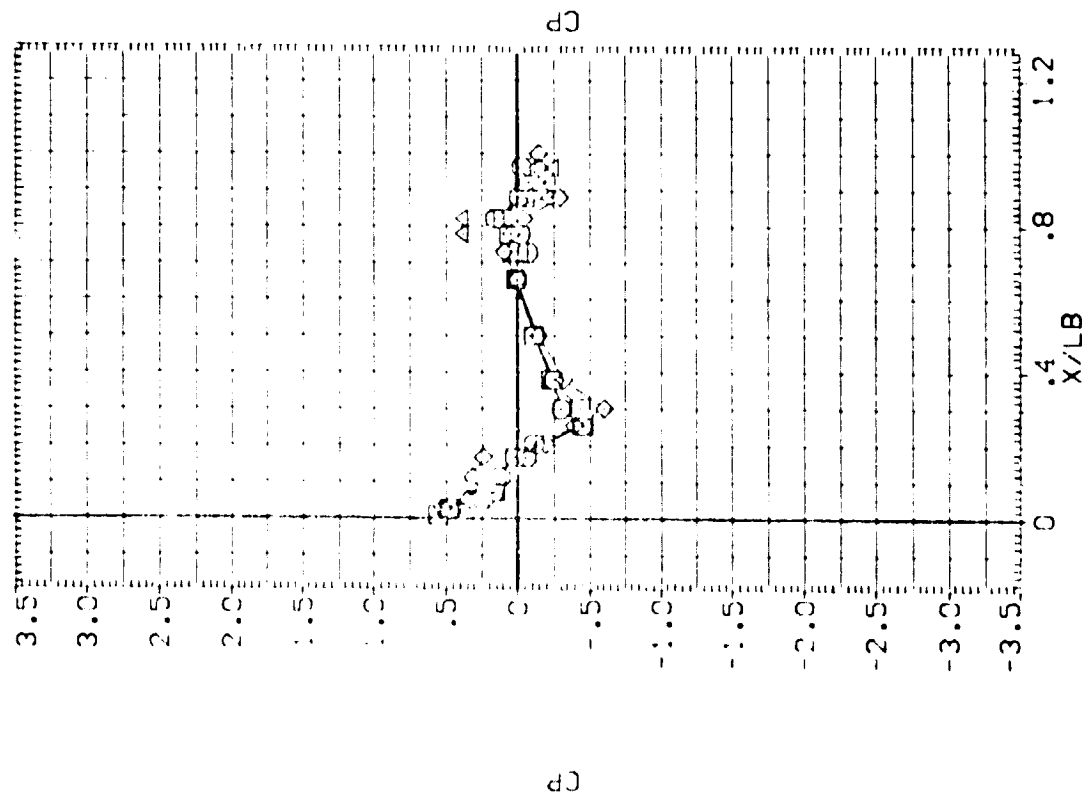
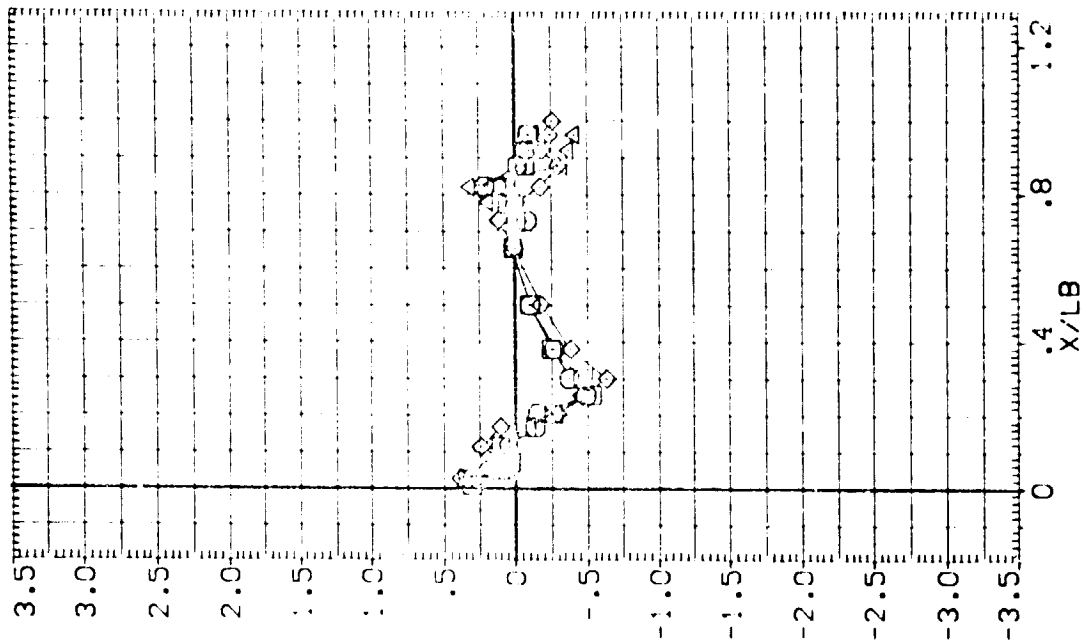
4.090
8.080

ALPHA0

-4.200

PARAMETRIC VALUES

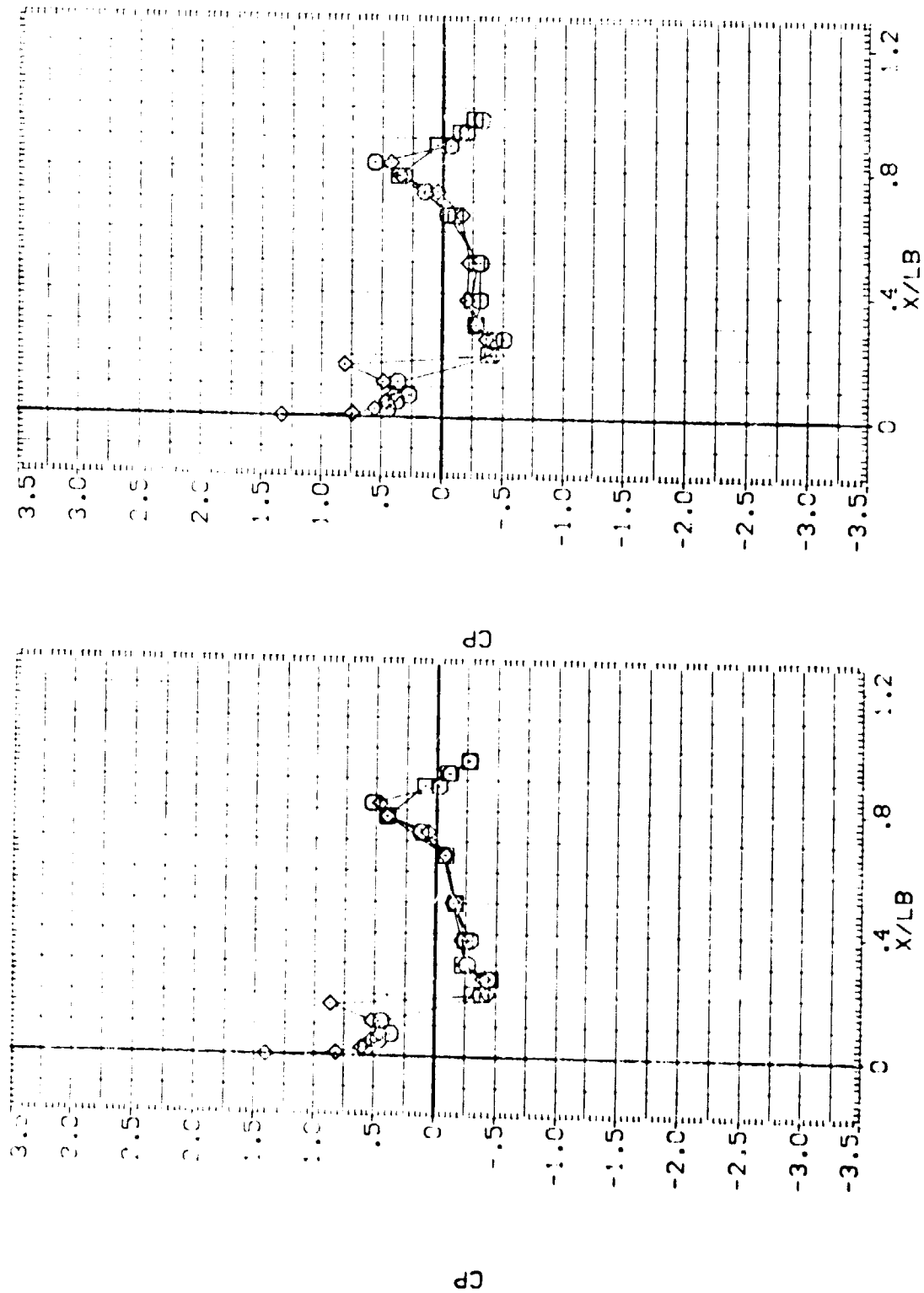
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC: 1-716 1A14 31+1:2+S12^25+AT10 CR3. FUSELAGE (RB1333)

SYMBOL	PR1	BETA0	ALPHA0	MACH	PARAMETRIC VALUES
○	150.000	4.090	-4.200	RUDDER	1.250 ELEVON
◇	155.000	8.380			.000 SP03RM
◇	160.000				.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:-7.6 1A14 01+112+S12N25+AT10 CRB. FUSELAGE (RB1B33)

SYMBOL

PR1 BETA0 ALPHA0

.000 -8.420 -.730

20.000 -4.140

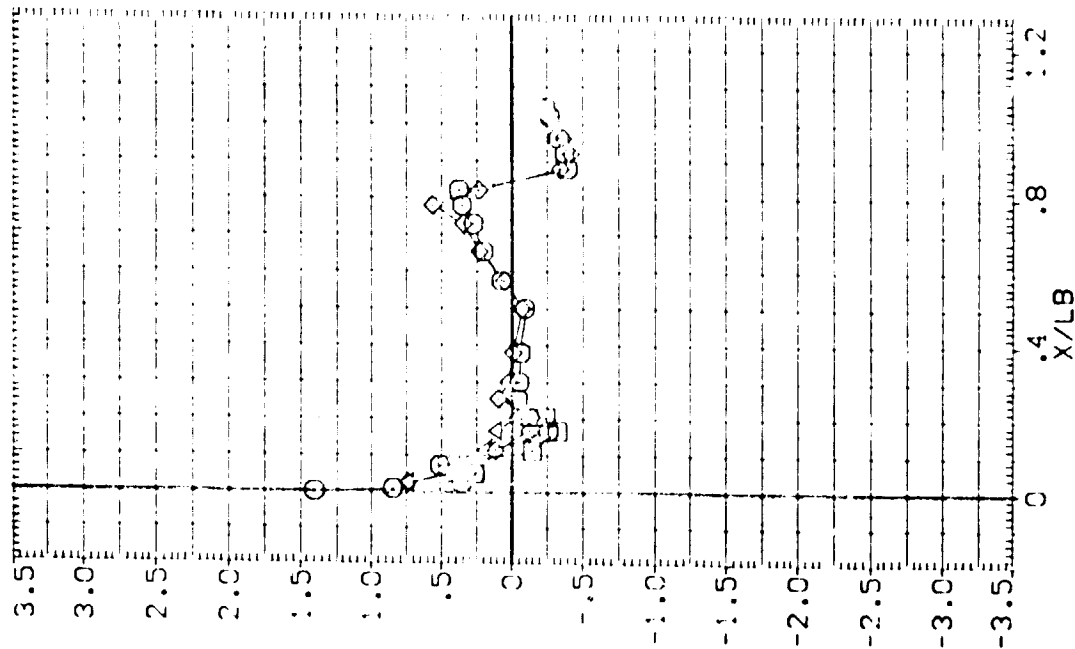
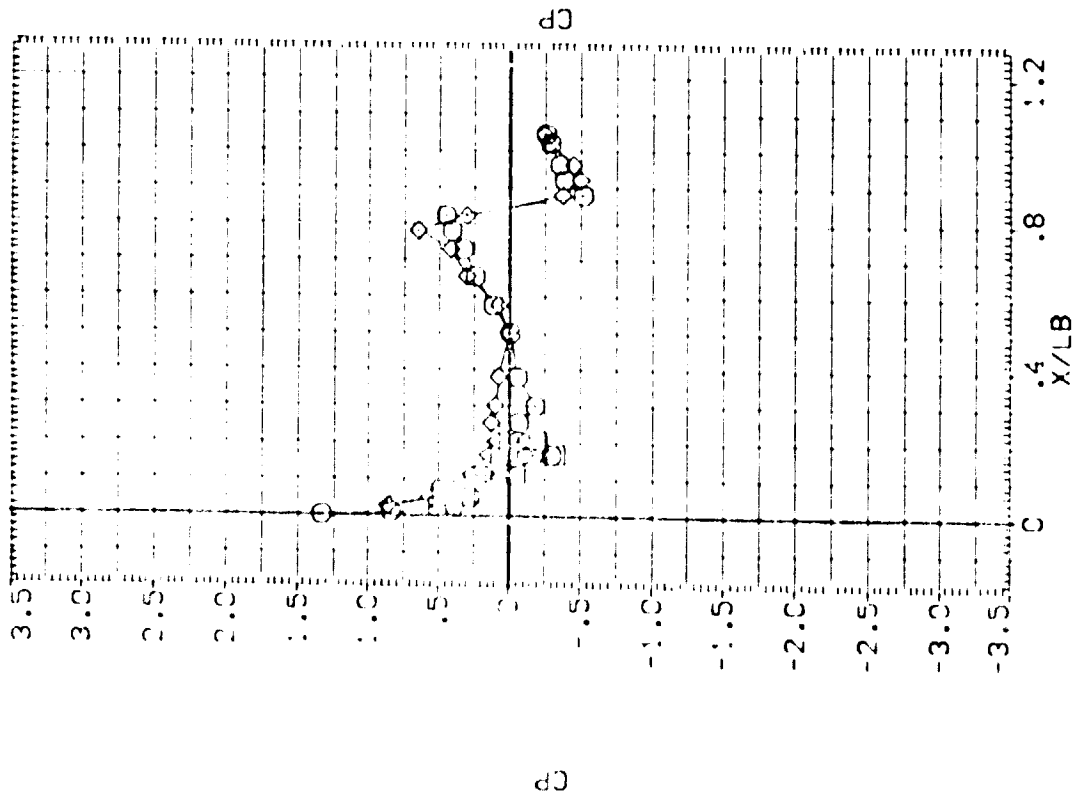
40.000

55.000

PARAMETRIC VALUES

MACH 1.250 ELEVON .000

RUDDER .000 SPOON .000



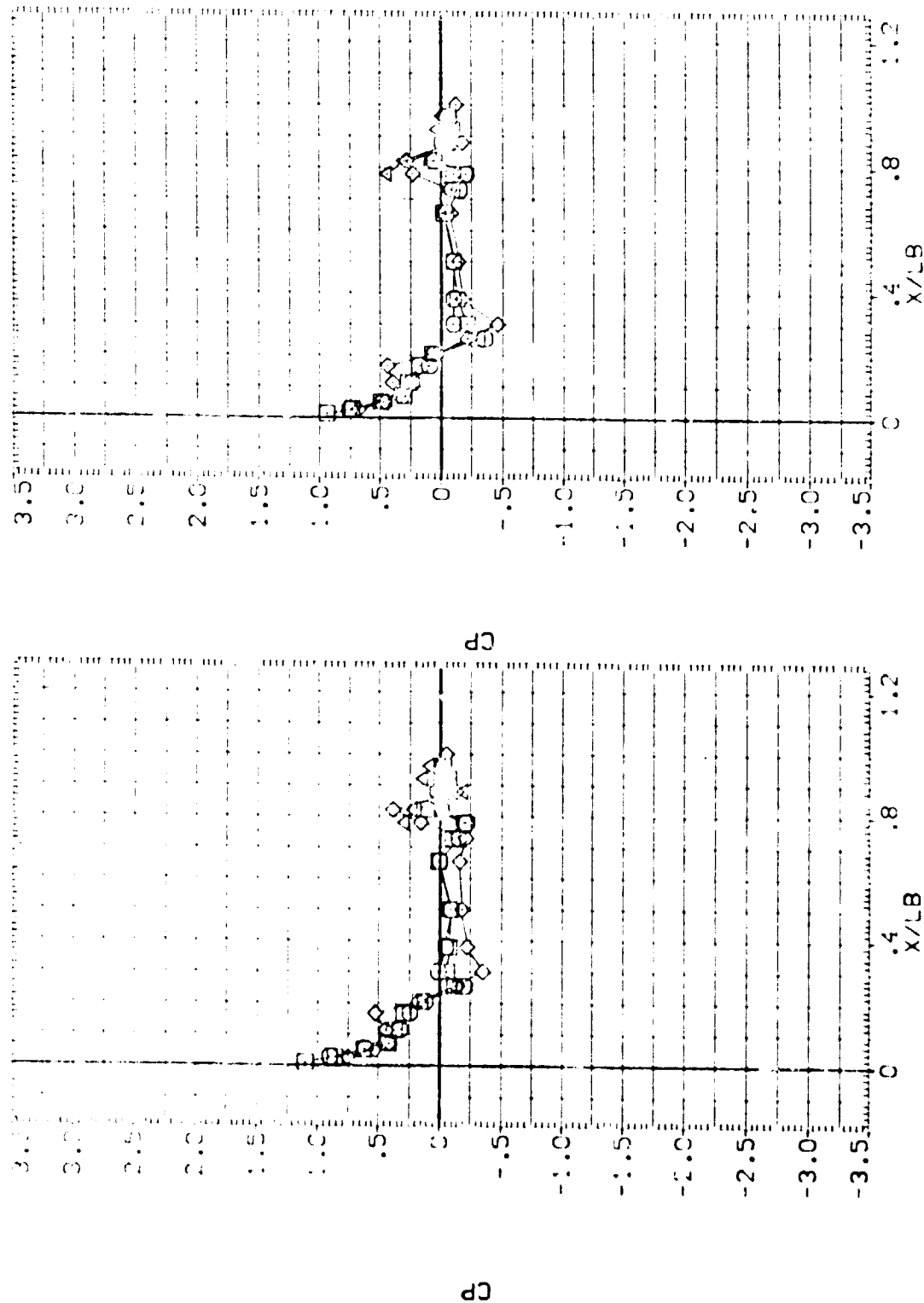
LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC: 1:16 0:1:1:2+S:2N25+ATC CRB, FUSELAGE (RB: B33)

PARAMETRIC VALUES
MACH 1.2 ELEVON .000
RUDDER .000

BETA: ALPHA:
-8.420 -7.730
-4.140

5+80.
10.000
80.000
100.000
120.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

6-2

ARC11-716 IA14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL
 ○
 □
 ◇

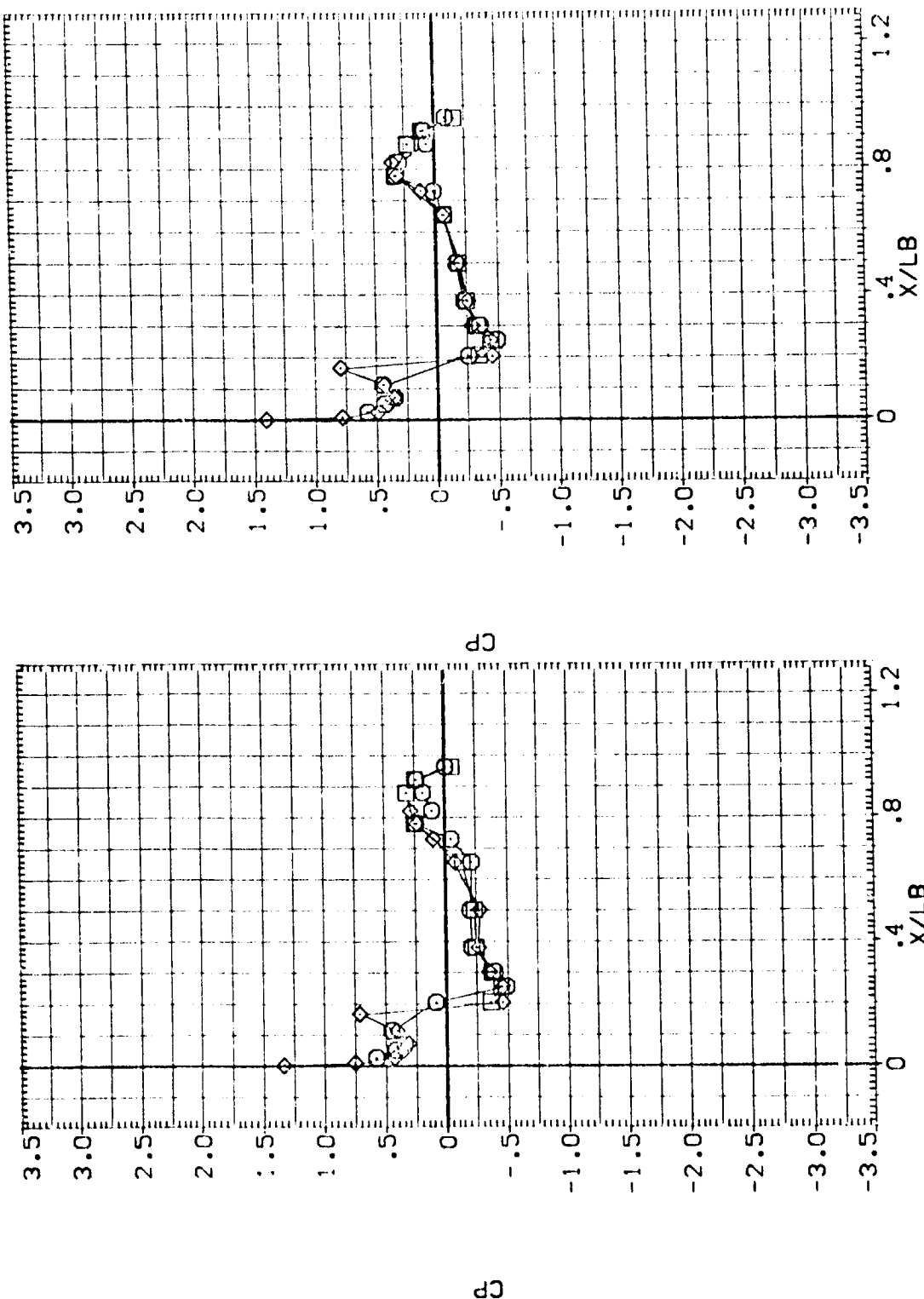
PHI
 150.000
 165.000
 180.000

BETA
 -8.420
 -4.140

ALPHA
 -7.30

MACH
 RUDDER

PARAMETRIC VALUES
 1.250
 .000
 ELEVON
 .000
 SPOBRK

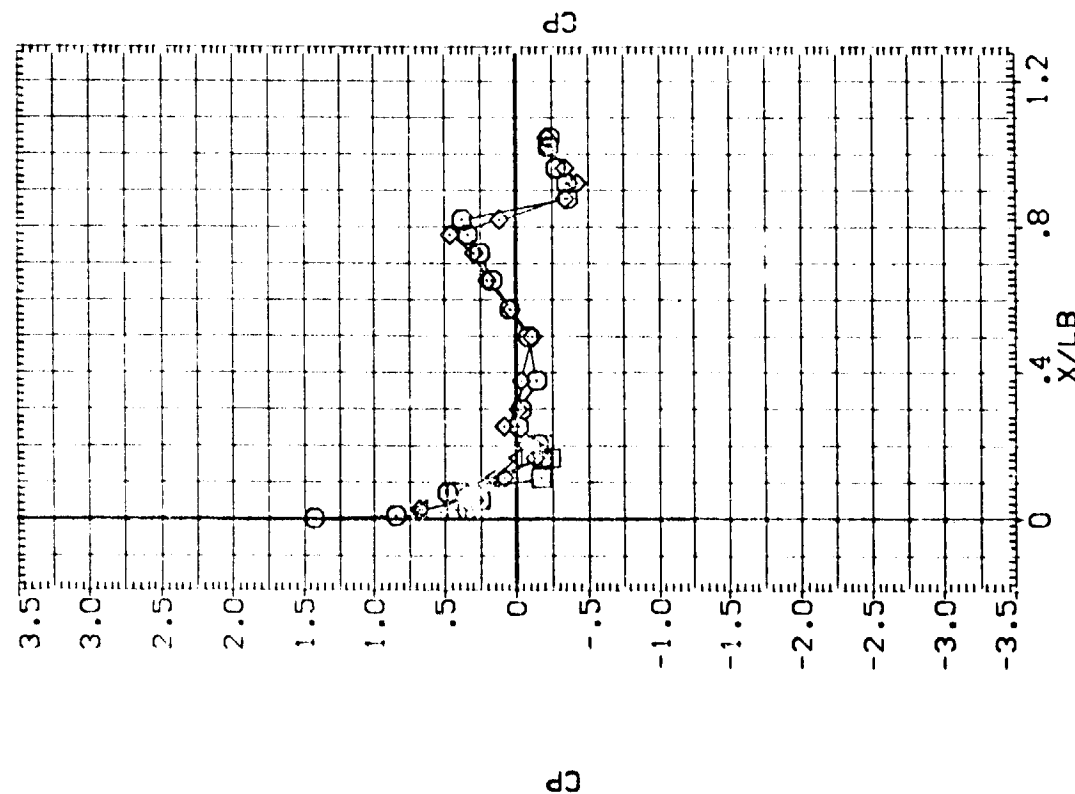
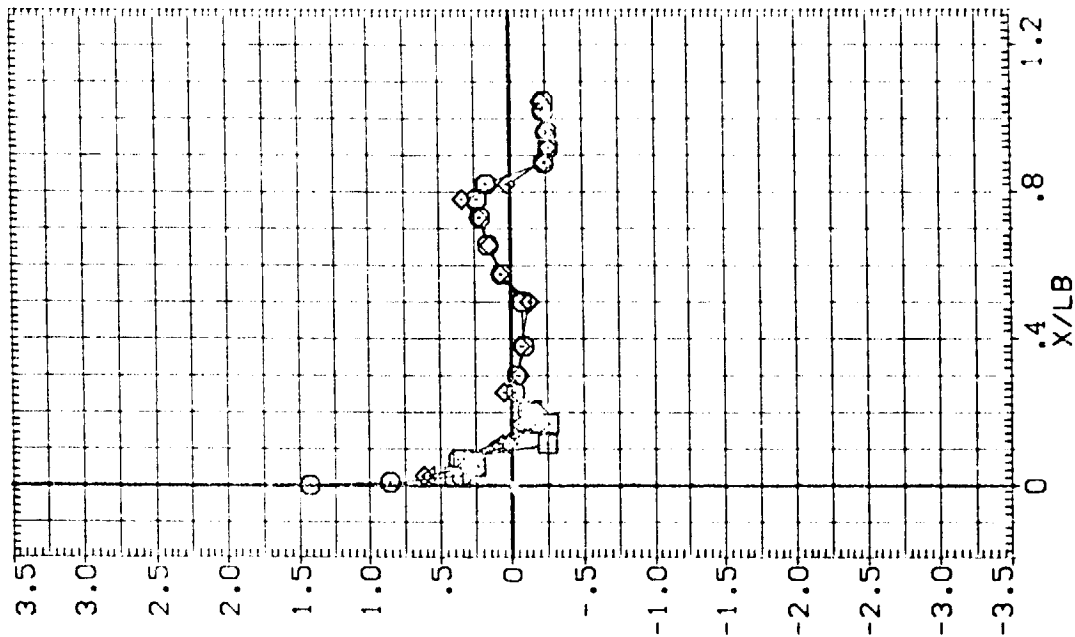


LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+A110 ORB. FUSELAGE (RB1B33)

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000

SYMBOL PHI BETA0 ALPHAD
O .000 -2.080 -.700
◇ 20.000 .030
△ 40.000
55.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL

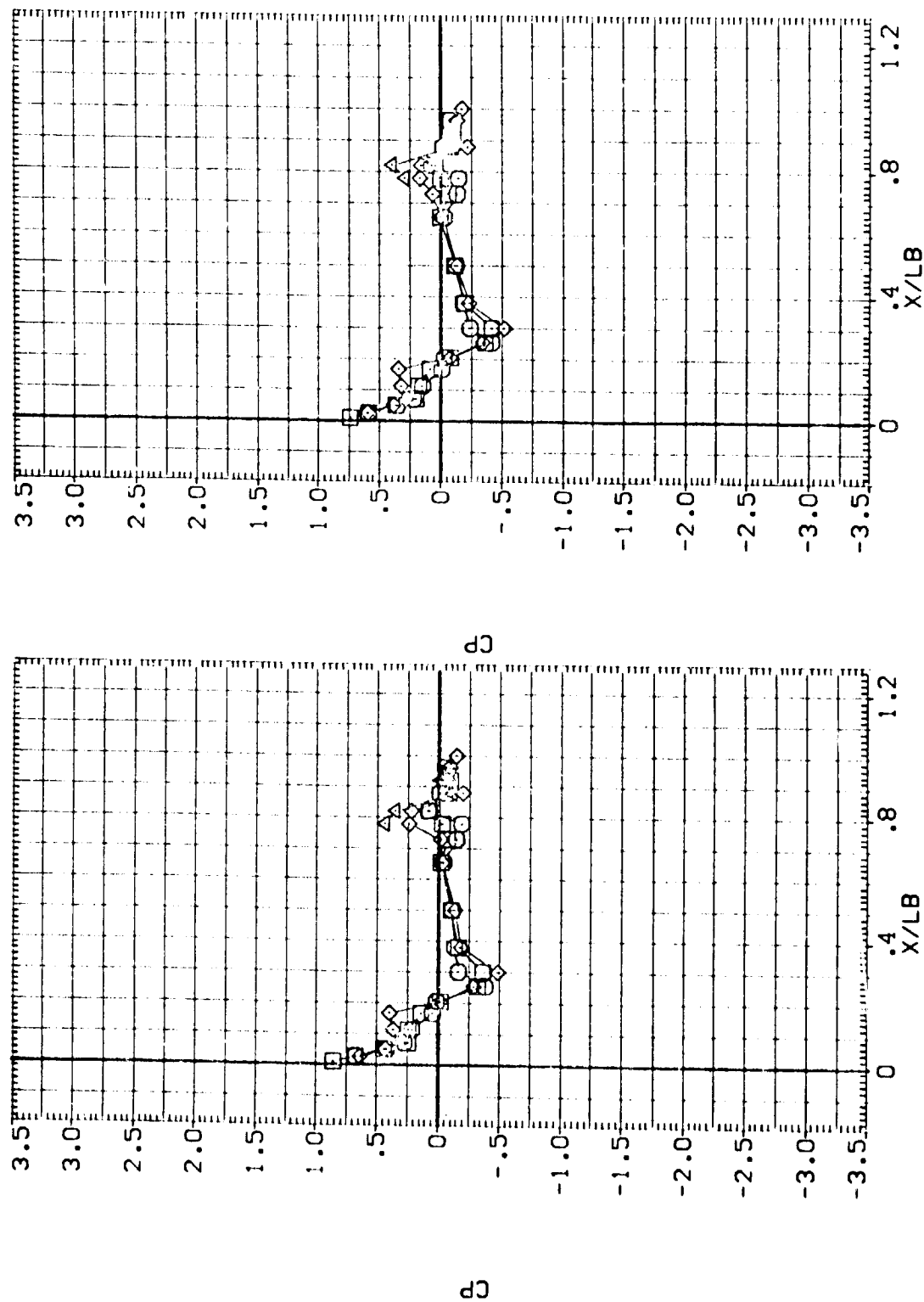
○ □ ◇ △

PHI 70.000
90.000
120.000
135.000

BETA0 -2.080
.030

ALPHA0 -7.00

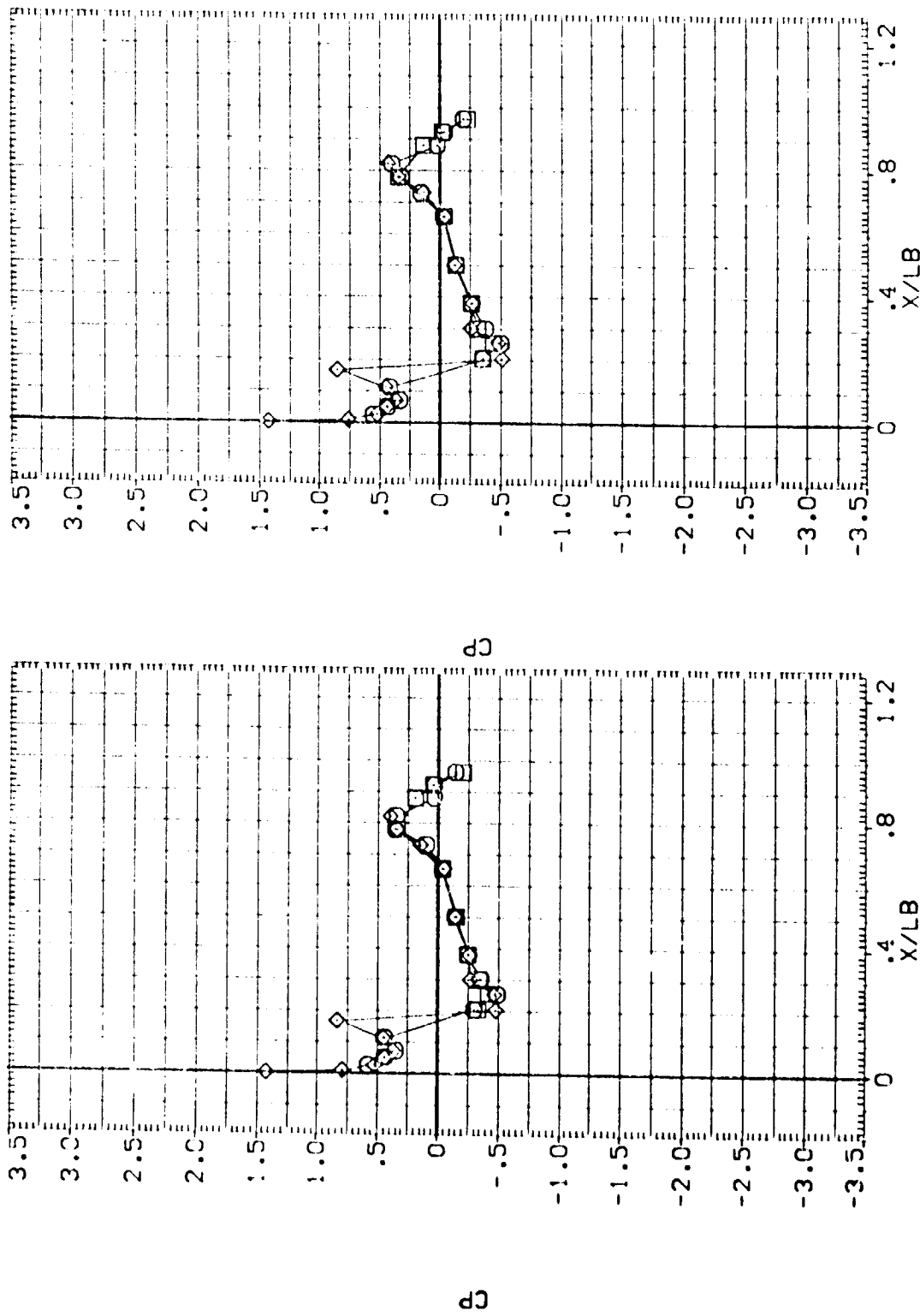
PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12-S12N25+AT10 ORB. FUSELAGE (RB1933)

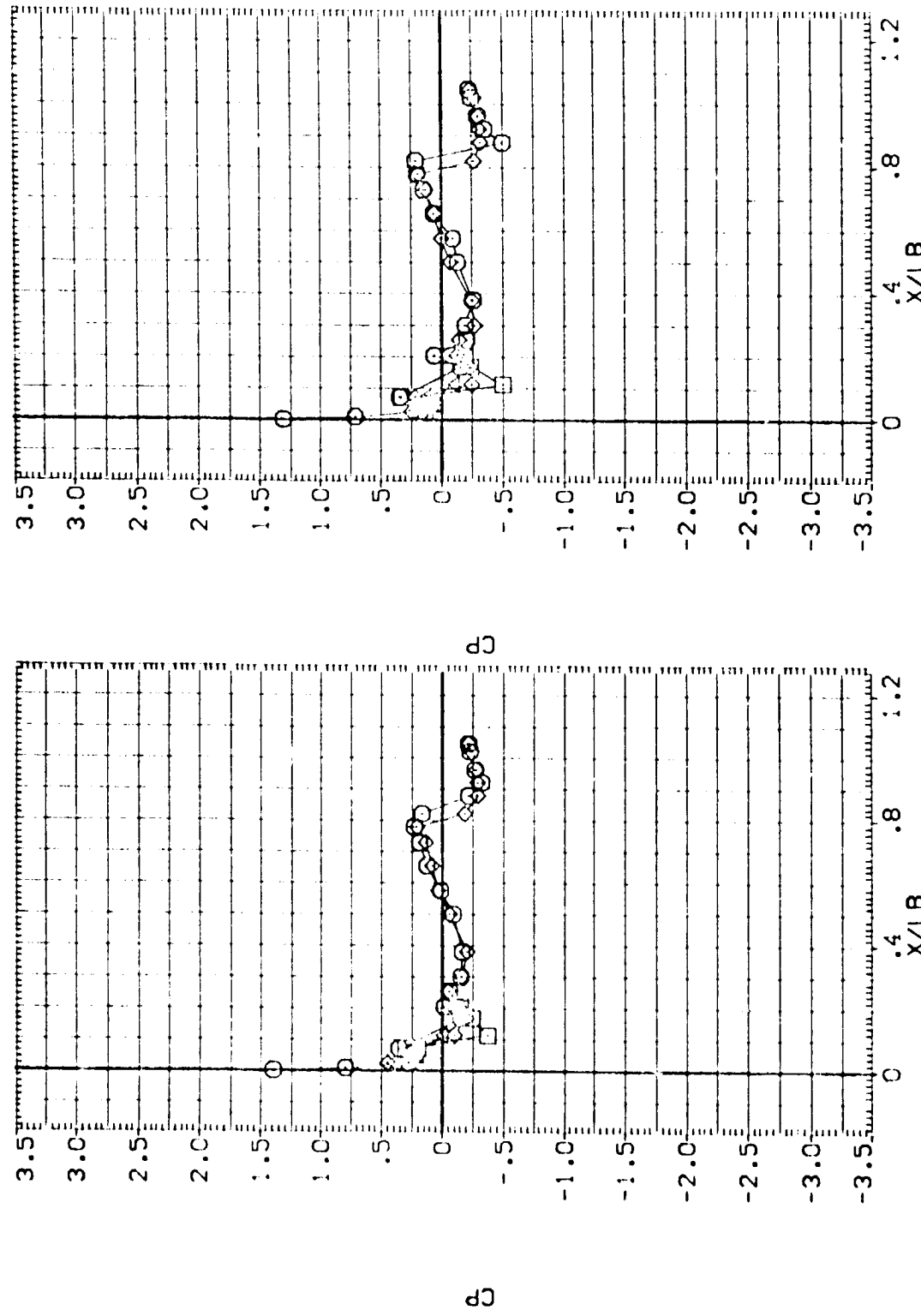
SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
	150.000	-2.080	-1.700	MACH	1.250	ELEVON
	165.000	.030		RUDDER	.000	SPDBRK
	180.000				.000	.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-7:6 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (R81B33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	.000
○	.000	4.270	-7.10	RUDER	SPOBR	.000
□	20.000	8.130				
◇	40.000					
△	55.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+I12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

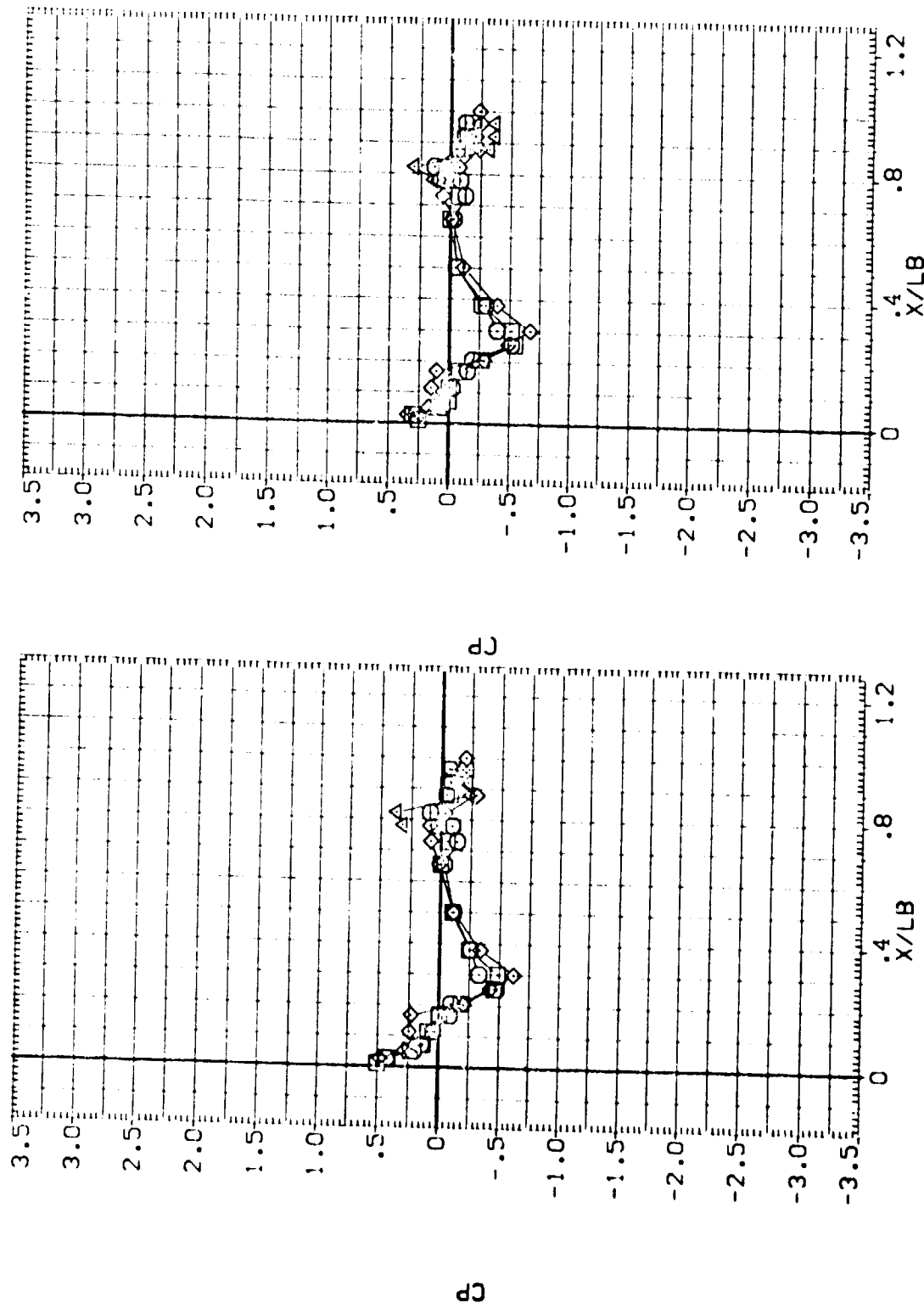
SYMBOL
 O
 ◇
 △

PHI
 70.000
 90.000
 120.000
 135.000

BETAS
 4.270
 8.130

ALPHAS
 -7.10

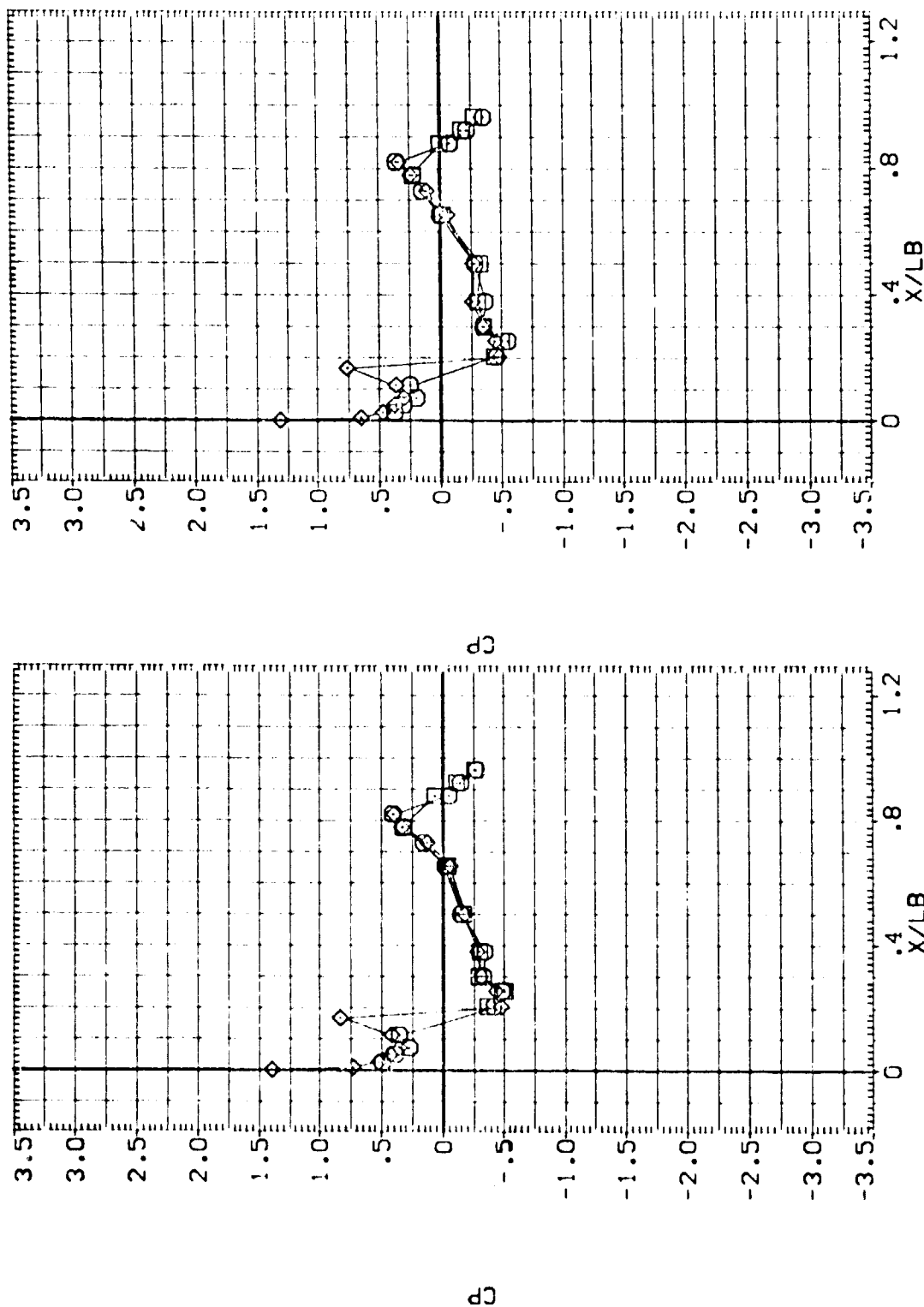
PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-7:6 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETAG	ALPHAQ	PARAMETRIC VALUES	
				MACH	ELEVON
○	150.000	4.270	-7.10	1.250	.000
◇	165.000	8.130		.000	SPORRK
◇	180.000				.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

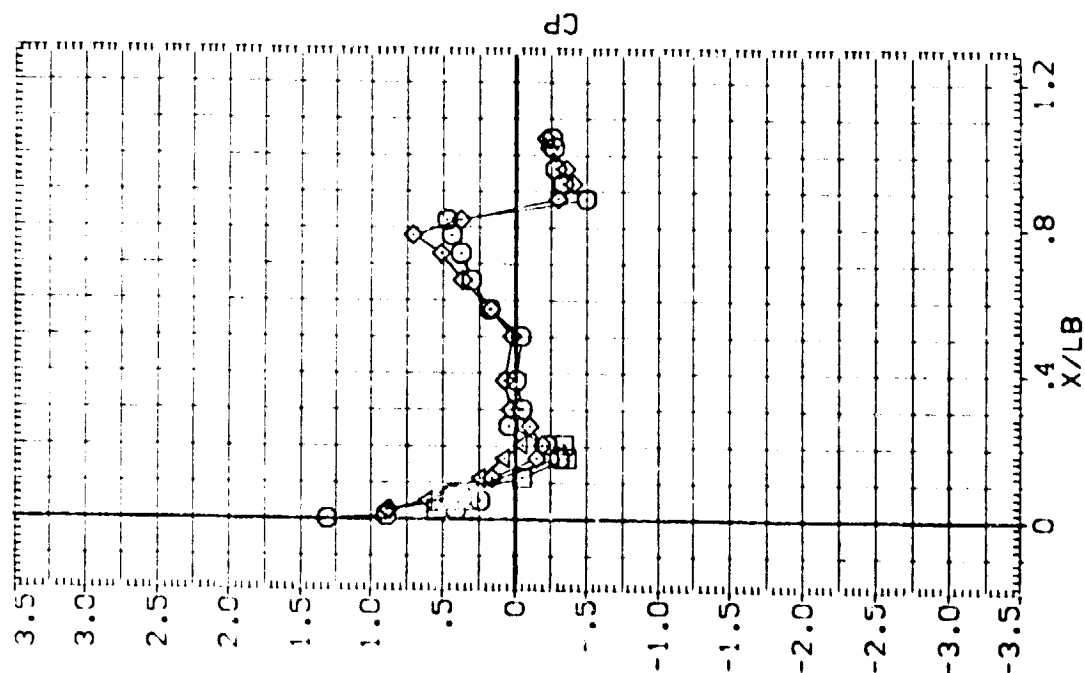
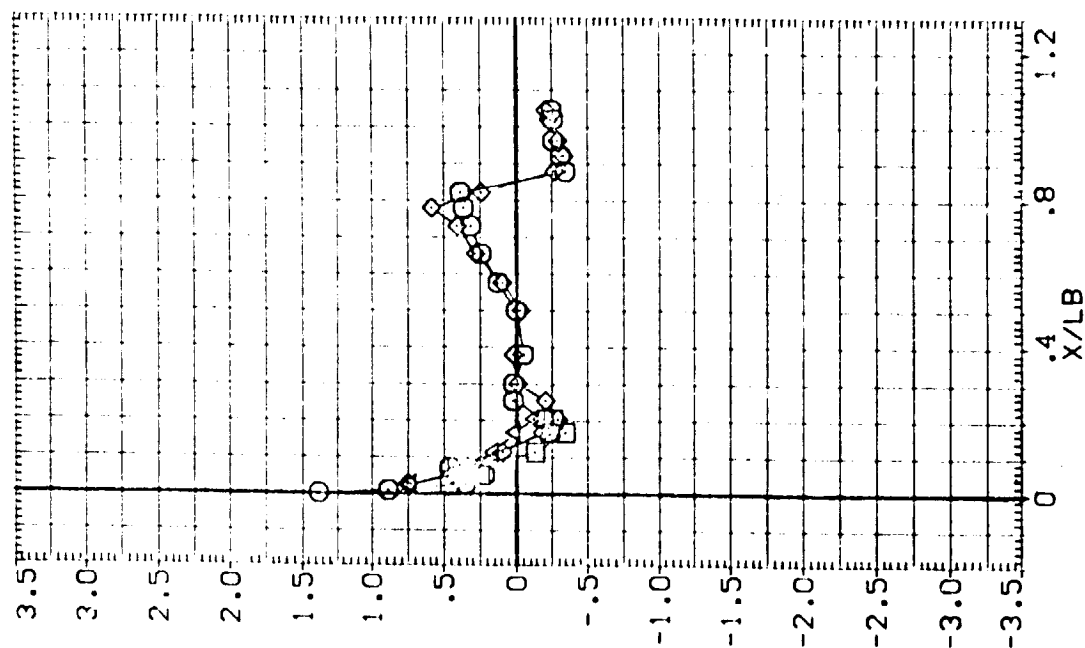
SYMBOL
○ ◇ △

PHI .000
20.000
40.000
55.000

BETA0
-8.090
-3.970

ALPHA0
4.200

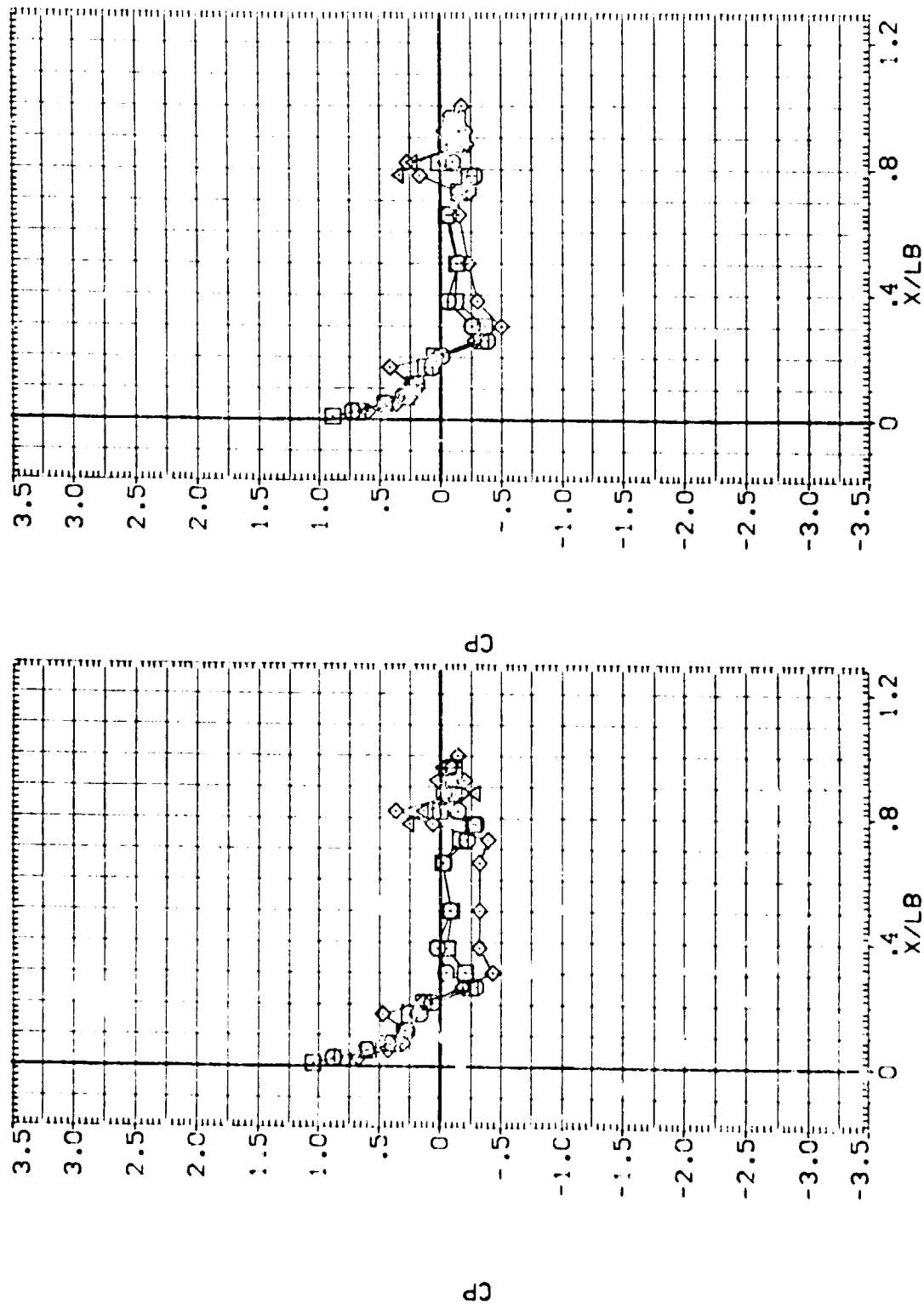
PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPDRY .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:11-716 1A14 01+112+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	
○	70.000	-8.090	4.200	1.250	.000	.000
□	90.000	-3.970		.000	SPOBRK	.000
◇	120.000					
△	135.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ORB. FUSELAGE (R81B33)

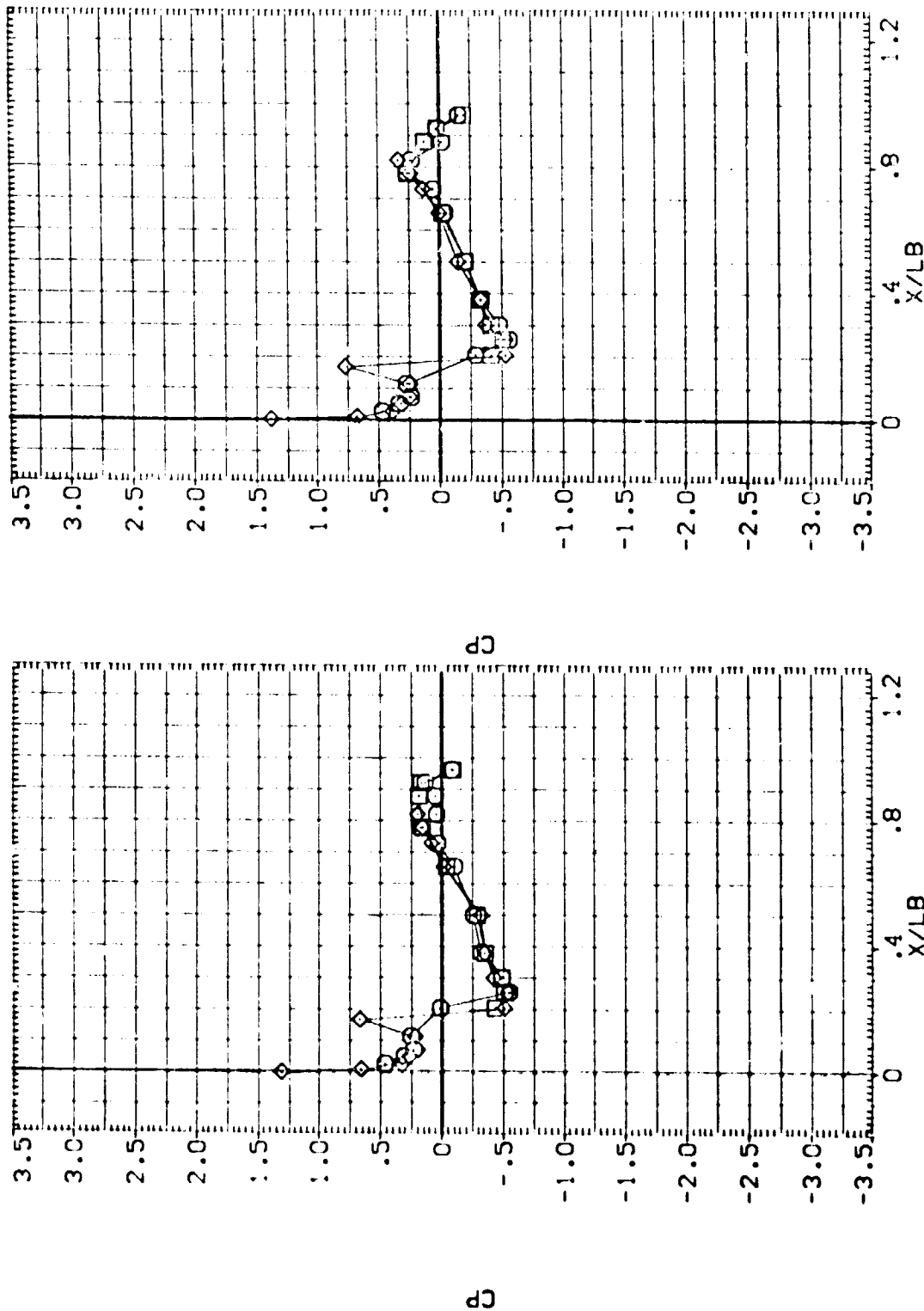
SYMBOL

150.000
155.000
160.000

BETA0
-8.090
-3.970

ALPHA0
4.200

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (R81B33)

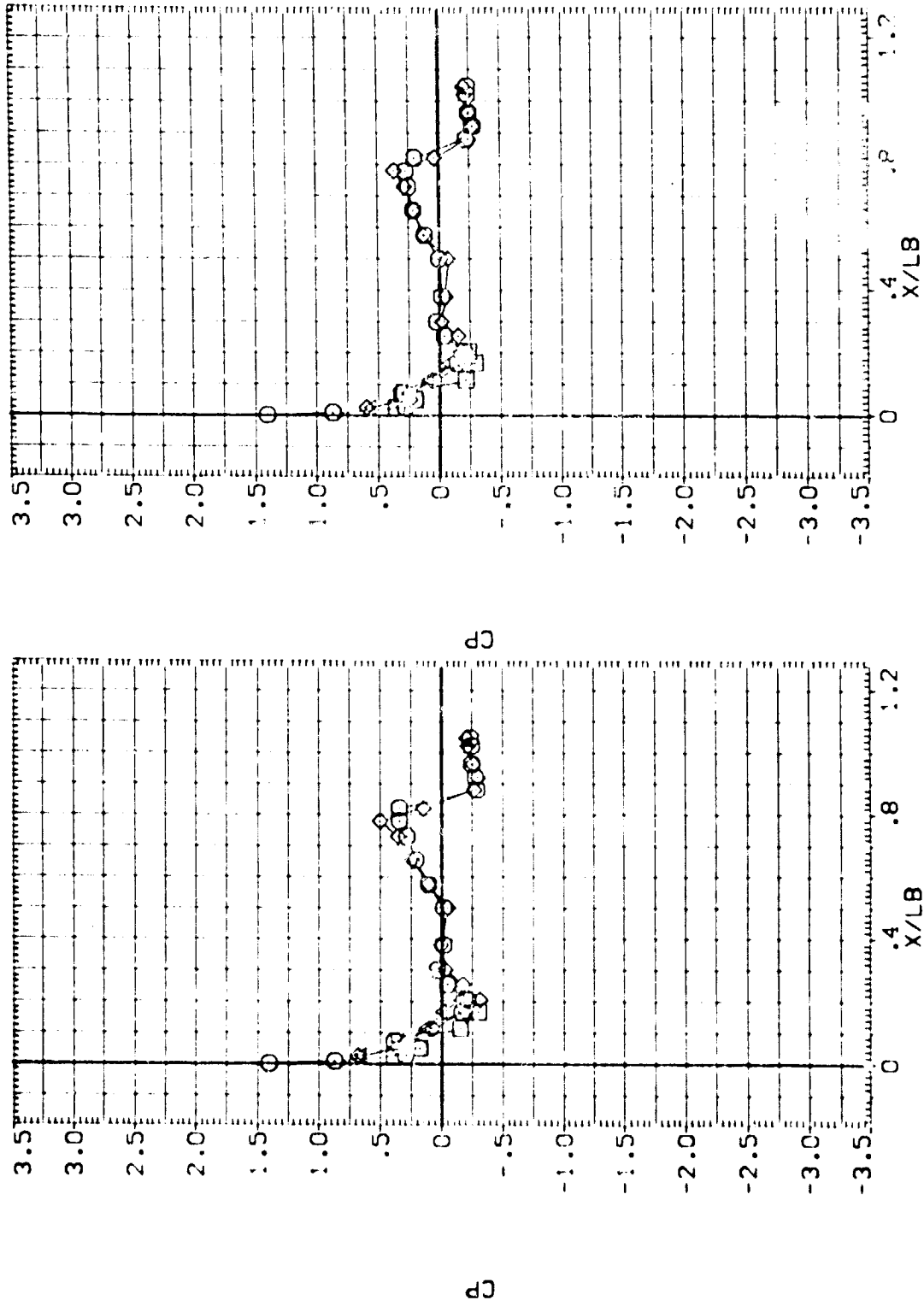
SYMBOL
○
◇
△

PHI .000
20.000
40.000
55.000

BETA0 -2.000
-.070

ALPHA0 4.220

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1833)

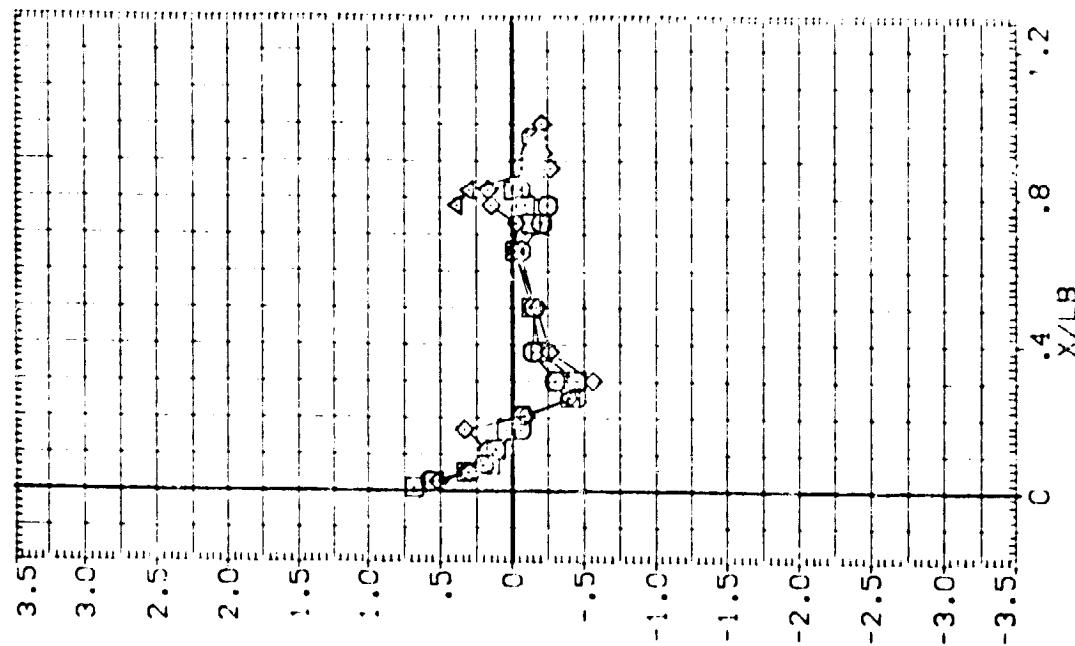
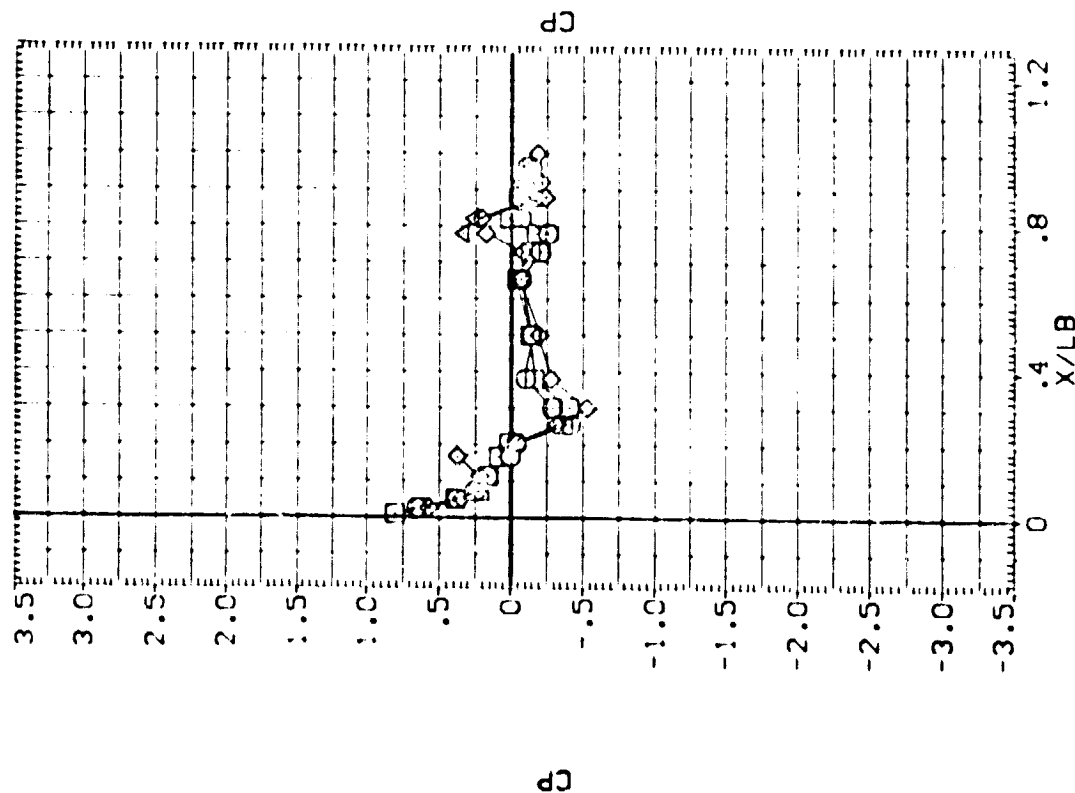
SYMBOL
 O 1
 1 2
 4

PHI 70.000
 90.000
 120.000
 135.000

BETA0 -2.000
 -1.070

ALPHA0 4.220

PARAMETRIC VALUES
 MACH 1.250
 ELEVON .000
 RUDDER .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-71E 1A14 01+T12+S12+25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL

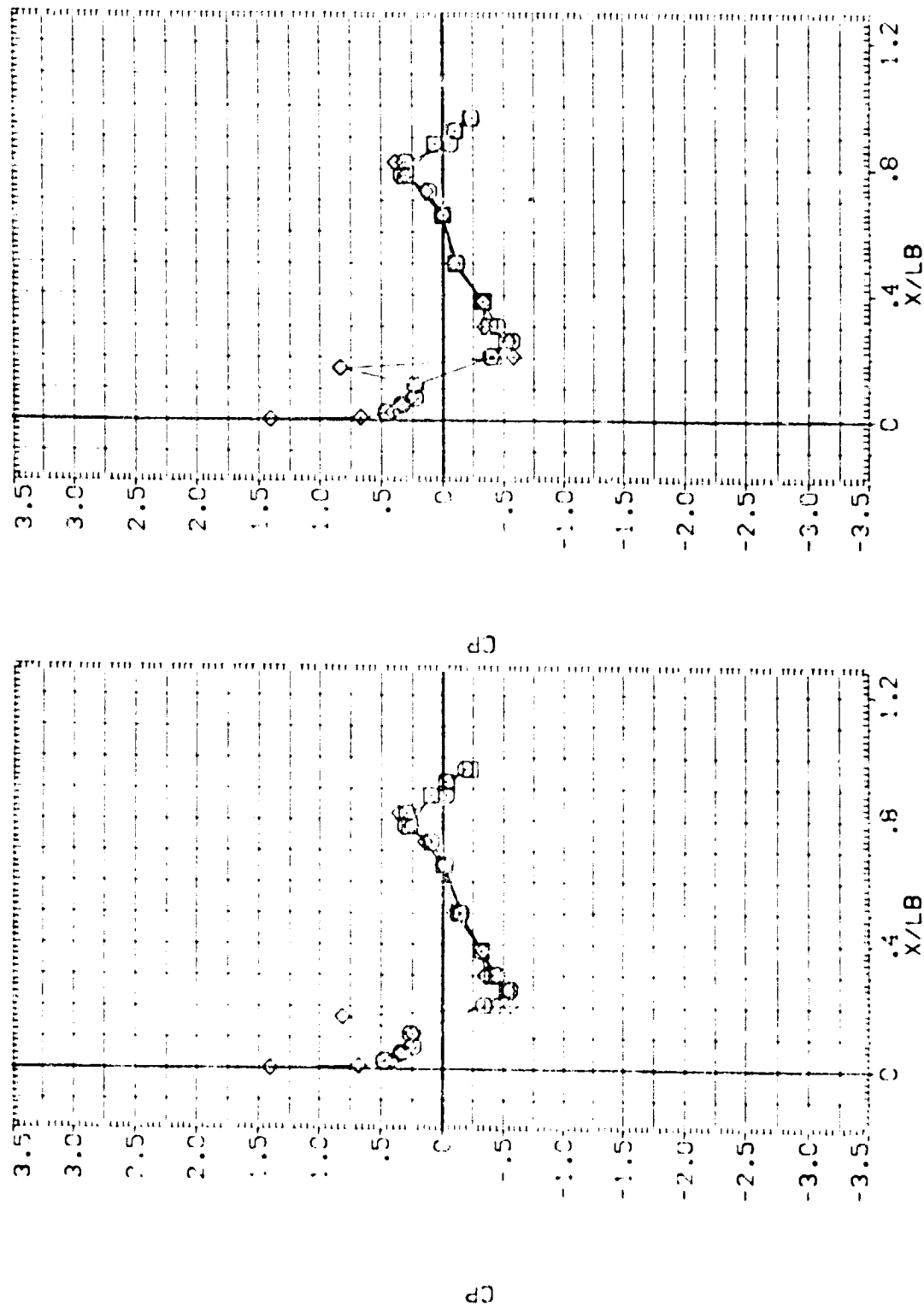
PHI 150.000
165.000
180.000

BETA 0
-2.000
-4.000

ALPHA 0
4.220

MACH
RUDDER

PARAMETRIC VALUES
1.750 1.000
ELEVON 1.000
SPORAK 1.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

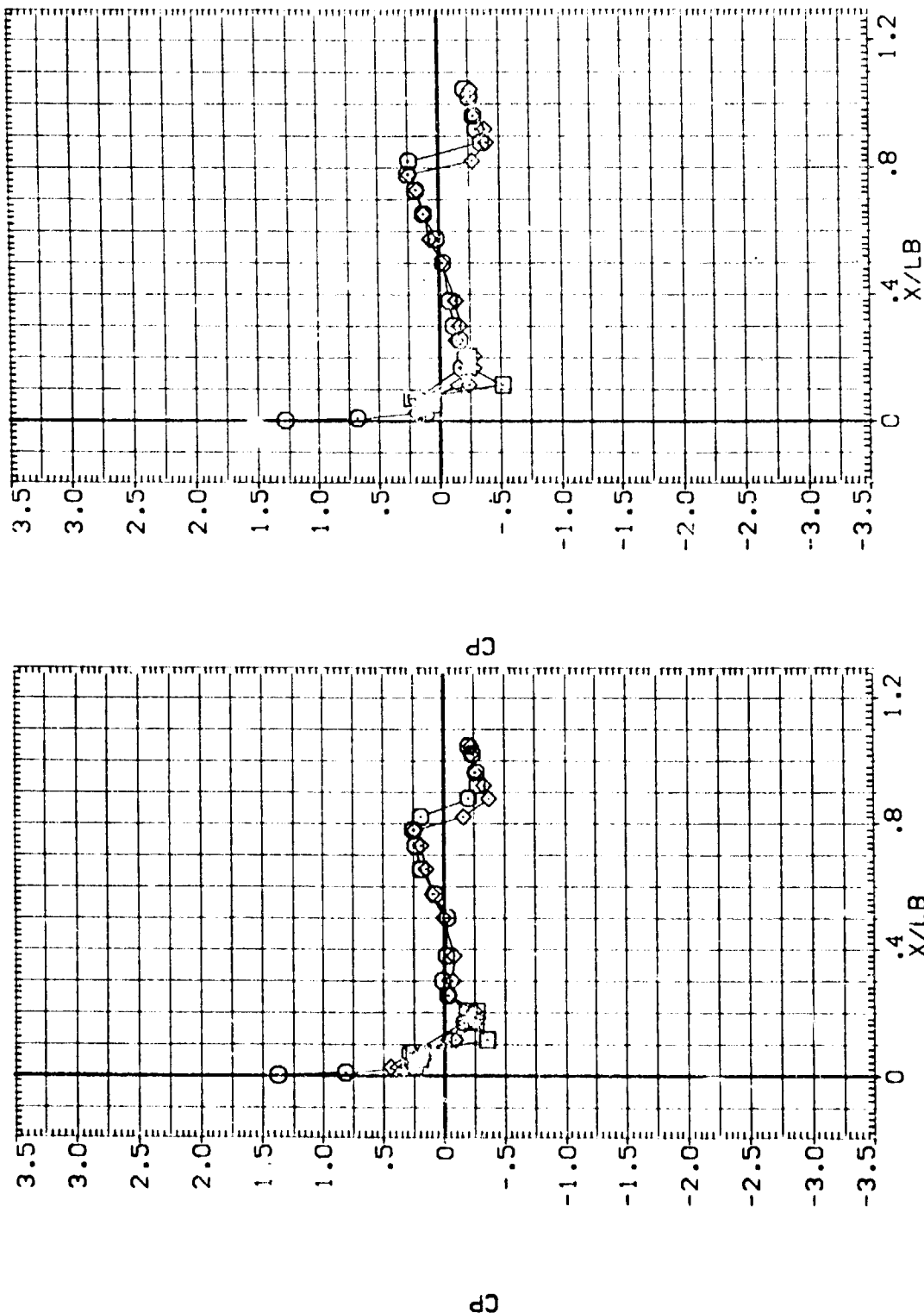
SYMBOL
 ○
 □
 ◇
 △

PHI .000
 20.000
 40.000
 55.000

BETA0 4.100
 8.150

ALPHA0 4.430

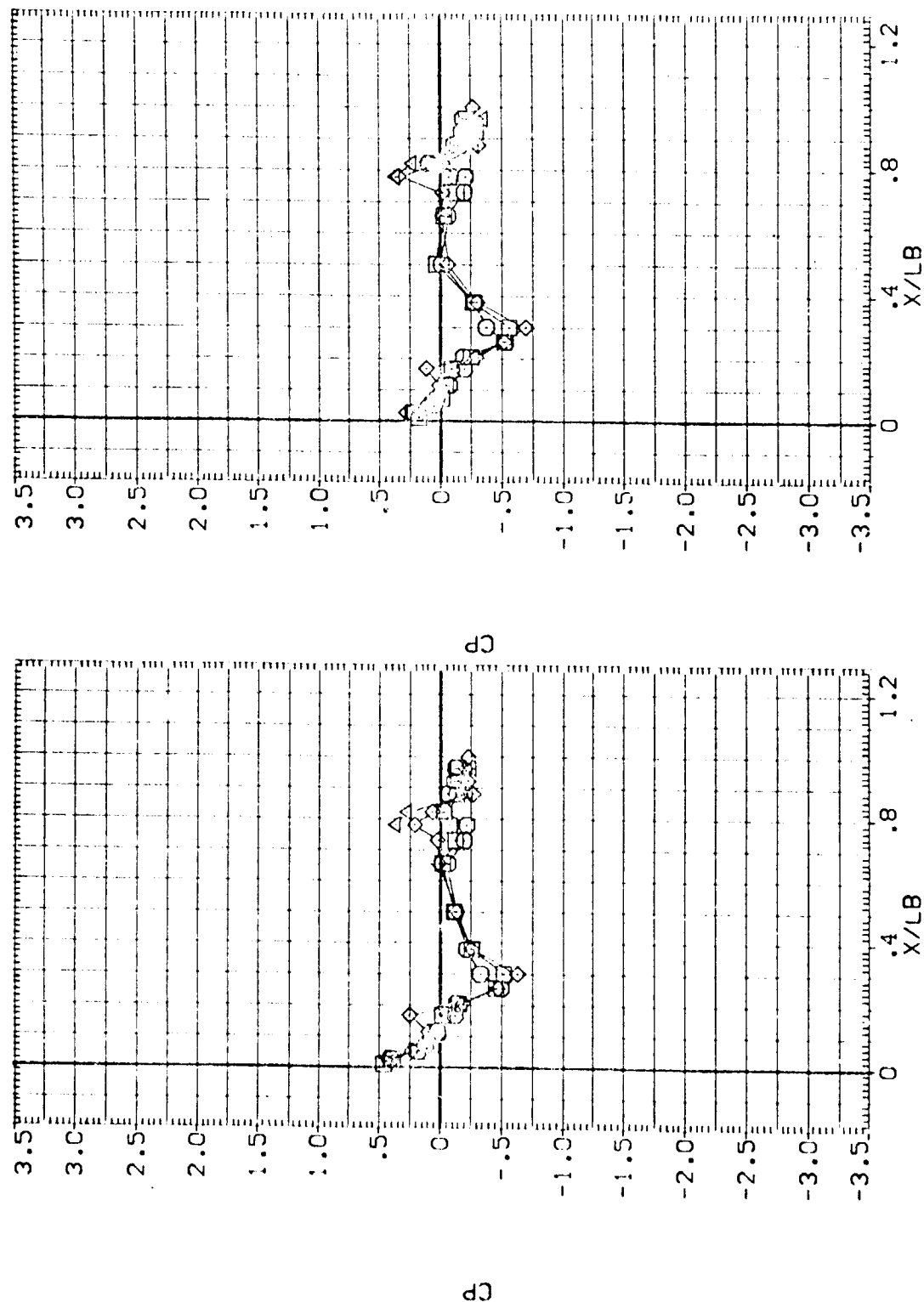
PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETAB	ALPHAG	PARAMETRIC VALUES		
				MACH	ELEVON	SPOBRK
□	70.000	4.100	4.430	1.250	.000	.000
◇	90.000	8.150		.000	.000	.000
△	120.000					
▽	135.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL

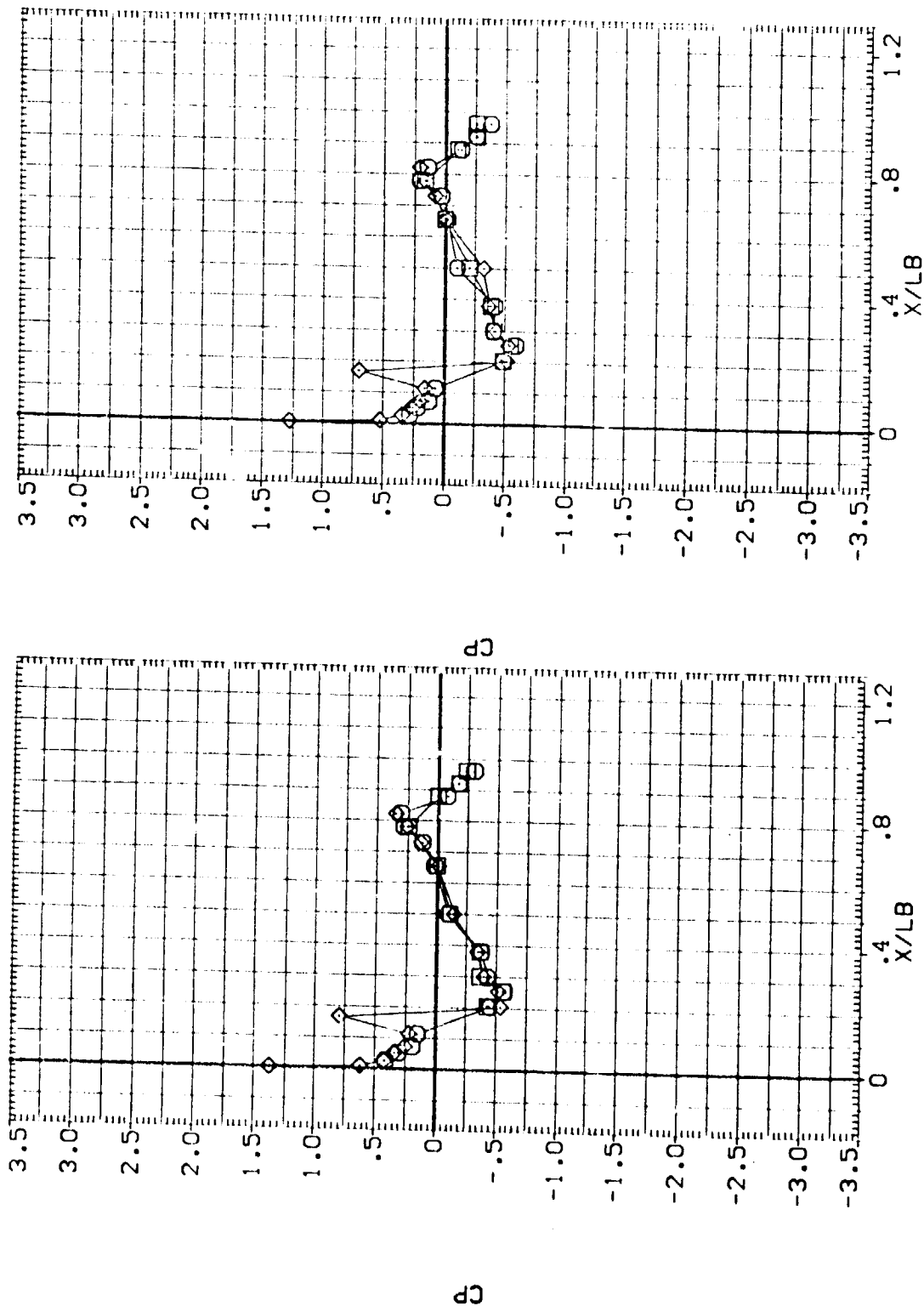
PHI
150.000
165.000
180.000

BETA0
4.100
9.150

ALPHA0
4.430

PARAMETRIC VALUES

MACH
1.250
ELEVON
.000
RUDDER
.000
SPOILER
.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

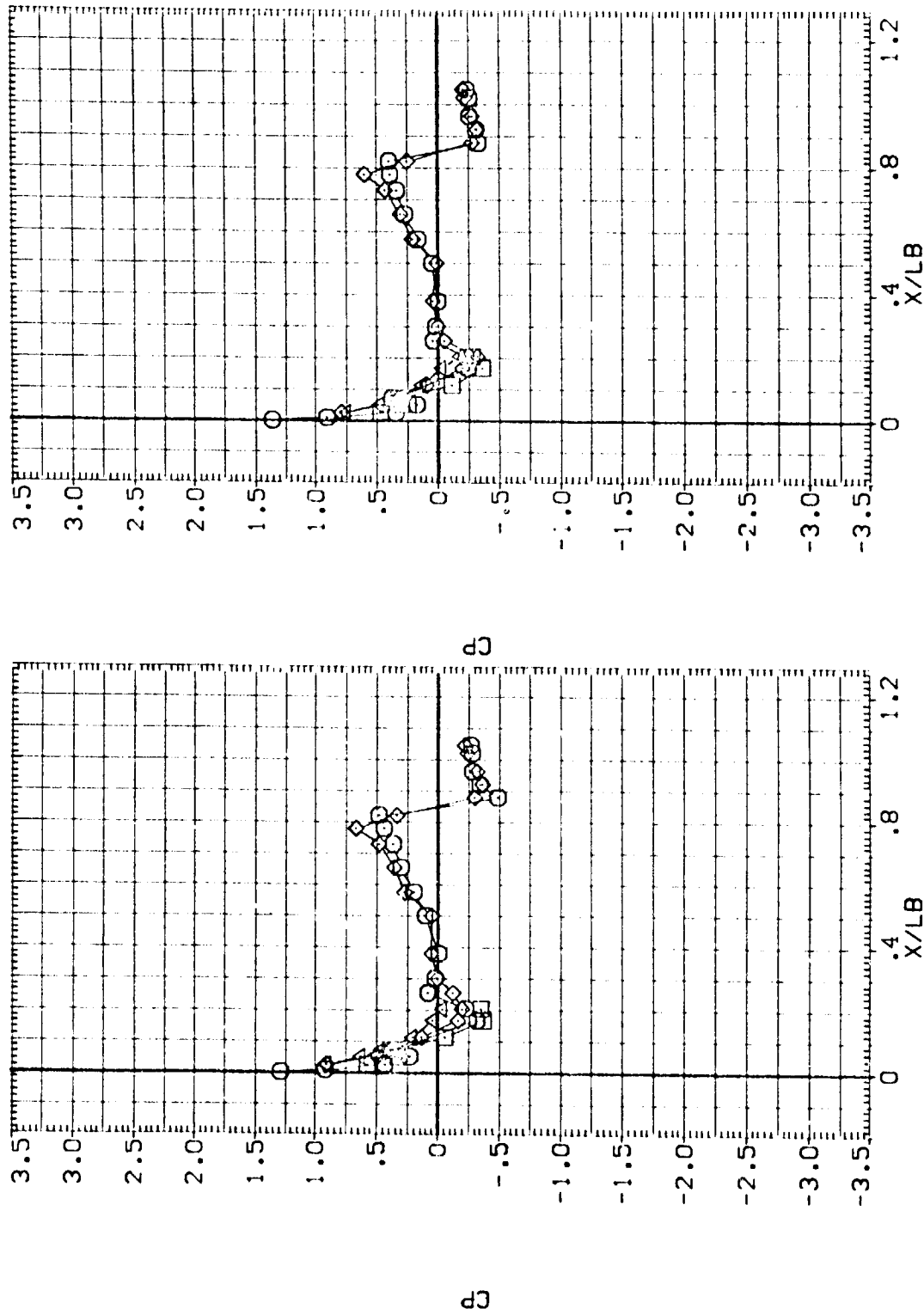
SYMBOL
○ □ ◇ △

PHI .000
20.000
40.000
55.000

BETA0
-8.030
-4.000

ALPHA0
7.930

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL

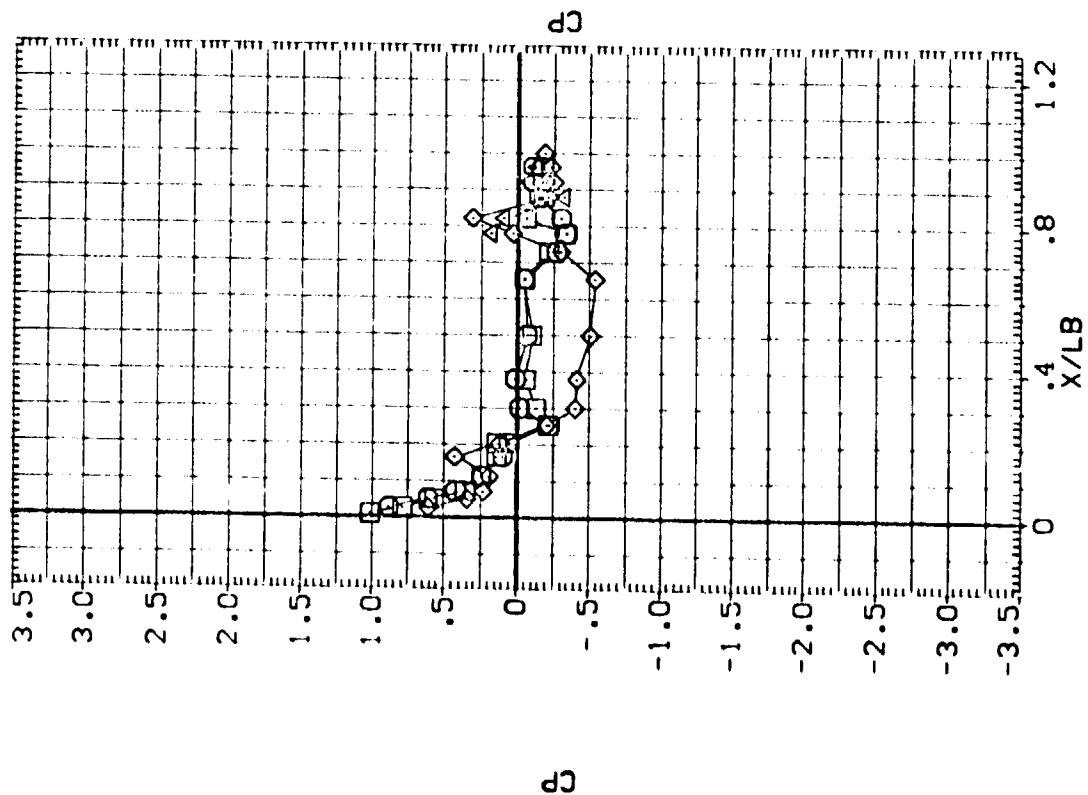
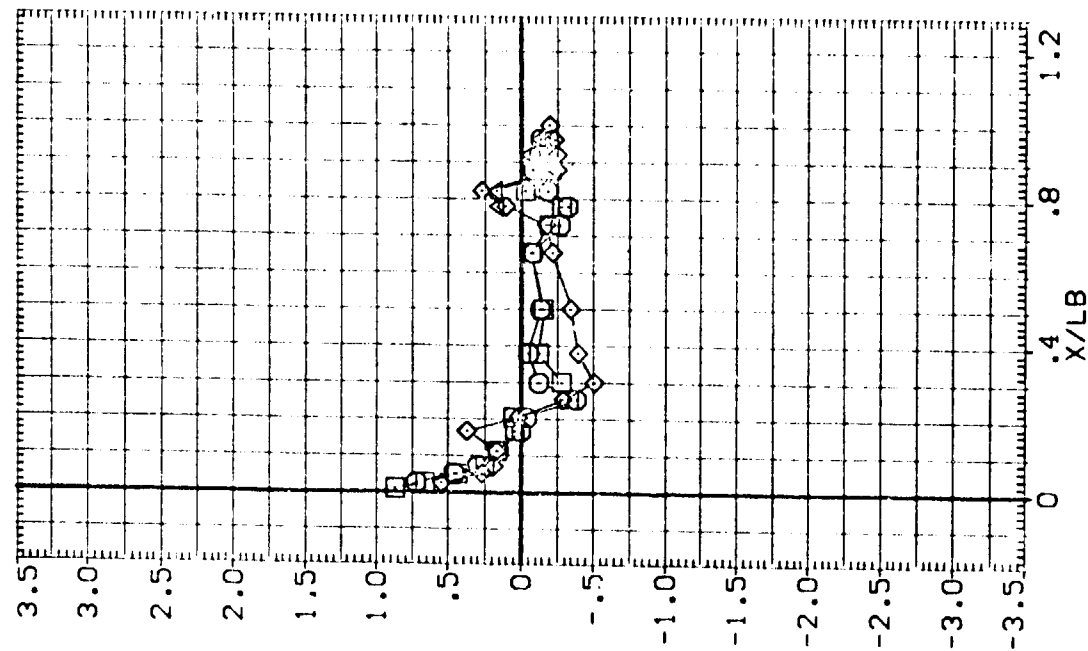
PHI
 70.000
 90.000
 120.000
 135.000

BETA
 -8.030
 -4.000

ALPHA
 7.930

MACH
 RUDDER

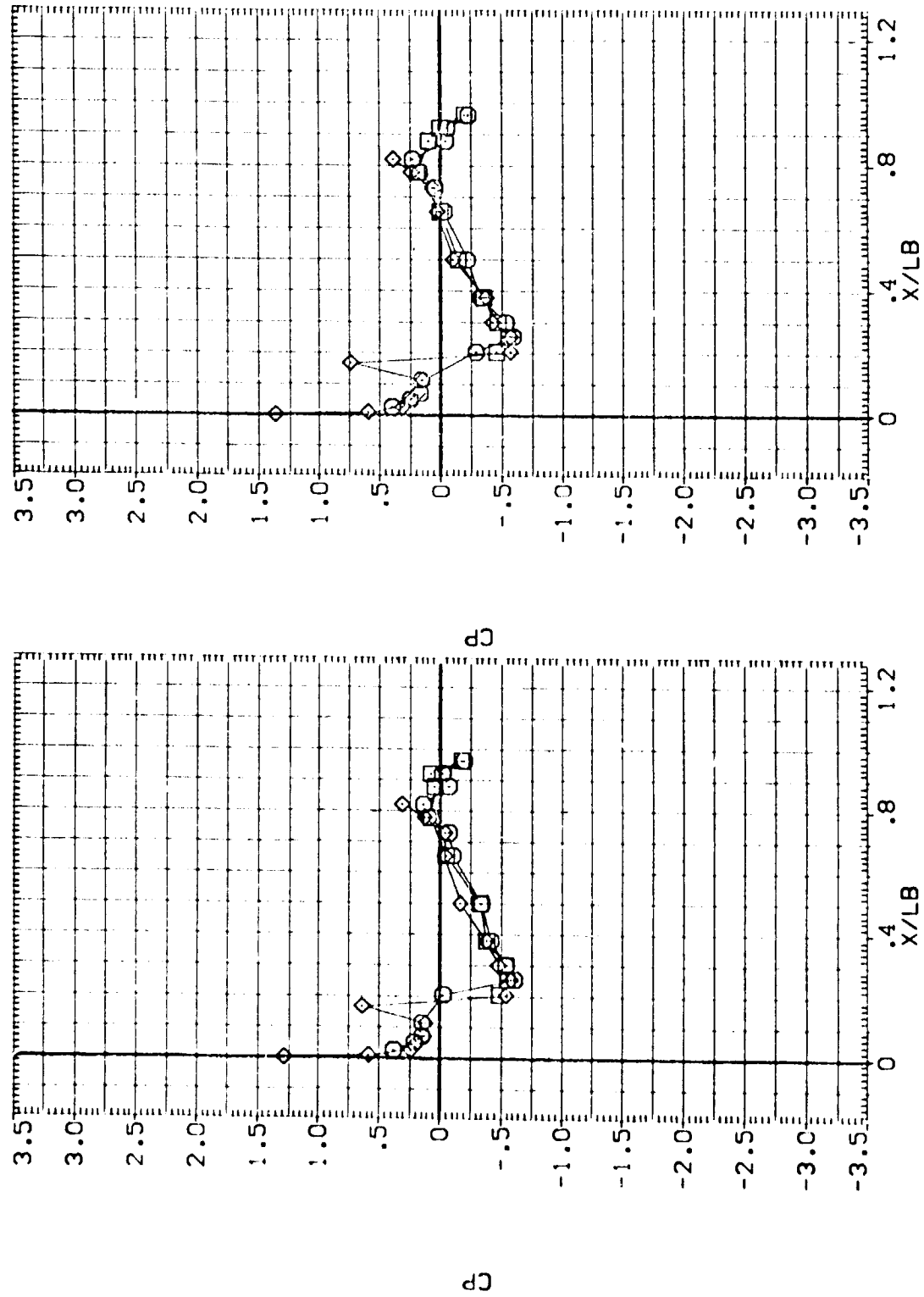
PARAMETRIC VALUES
 1.250
 .000
 ELEVON
 .000
 SPDRK
 .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB:B33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	1.250	ELEVON
○	150.000	-8.030	7.930	RUDDER	.000	SPOILER
◇	165.000	-4.000			.000	
◇	180.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 (A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33))

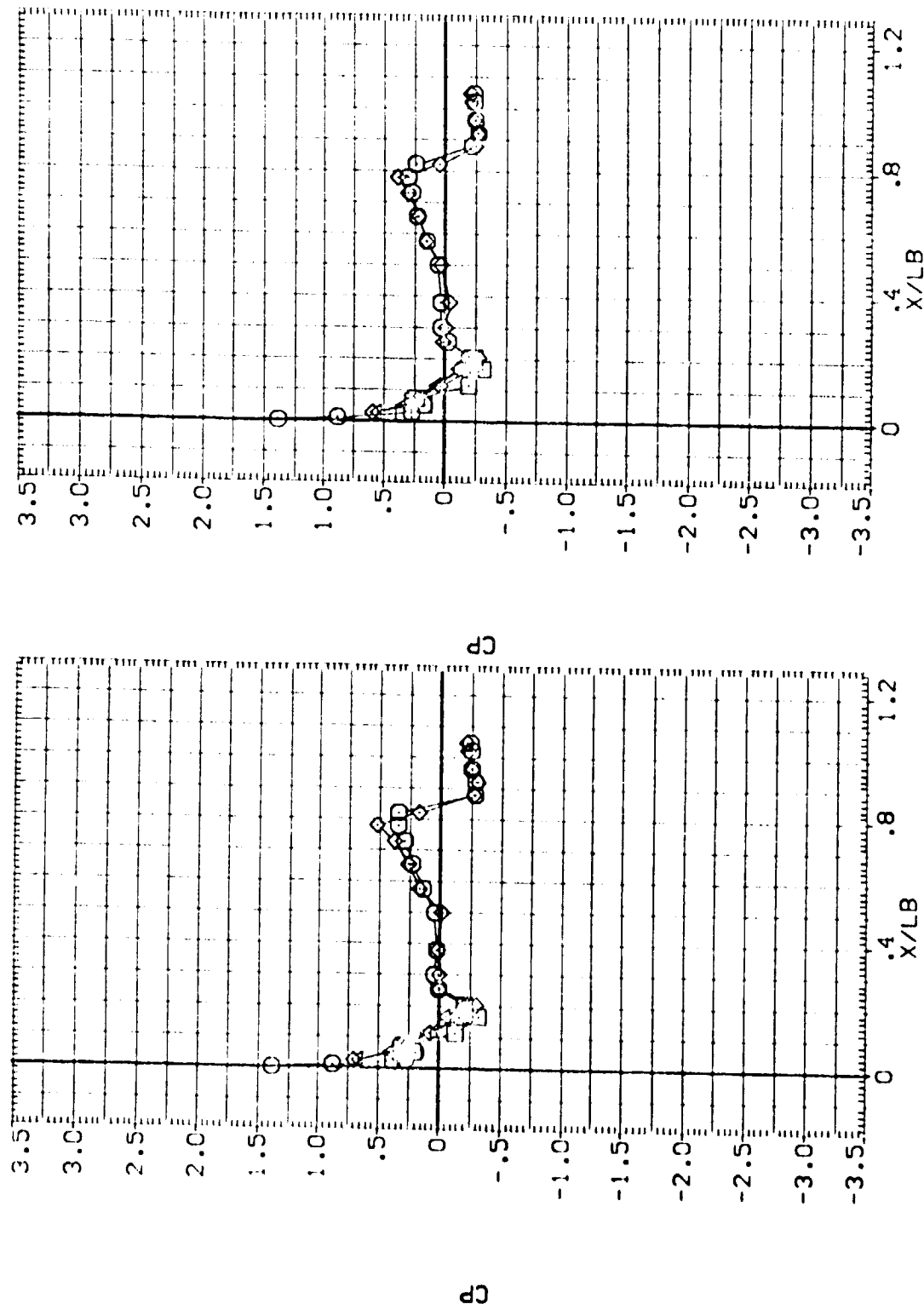
SYMBOL

PHI .000
20.000
40.000
55.000

BETA0 -2.030
.040

ALPHA0 7.830

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPOILER .000

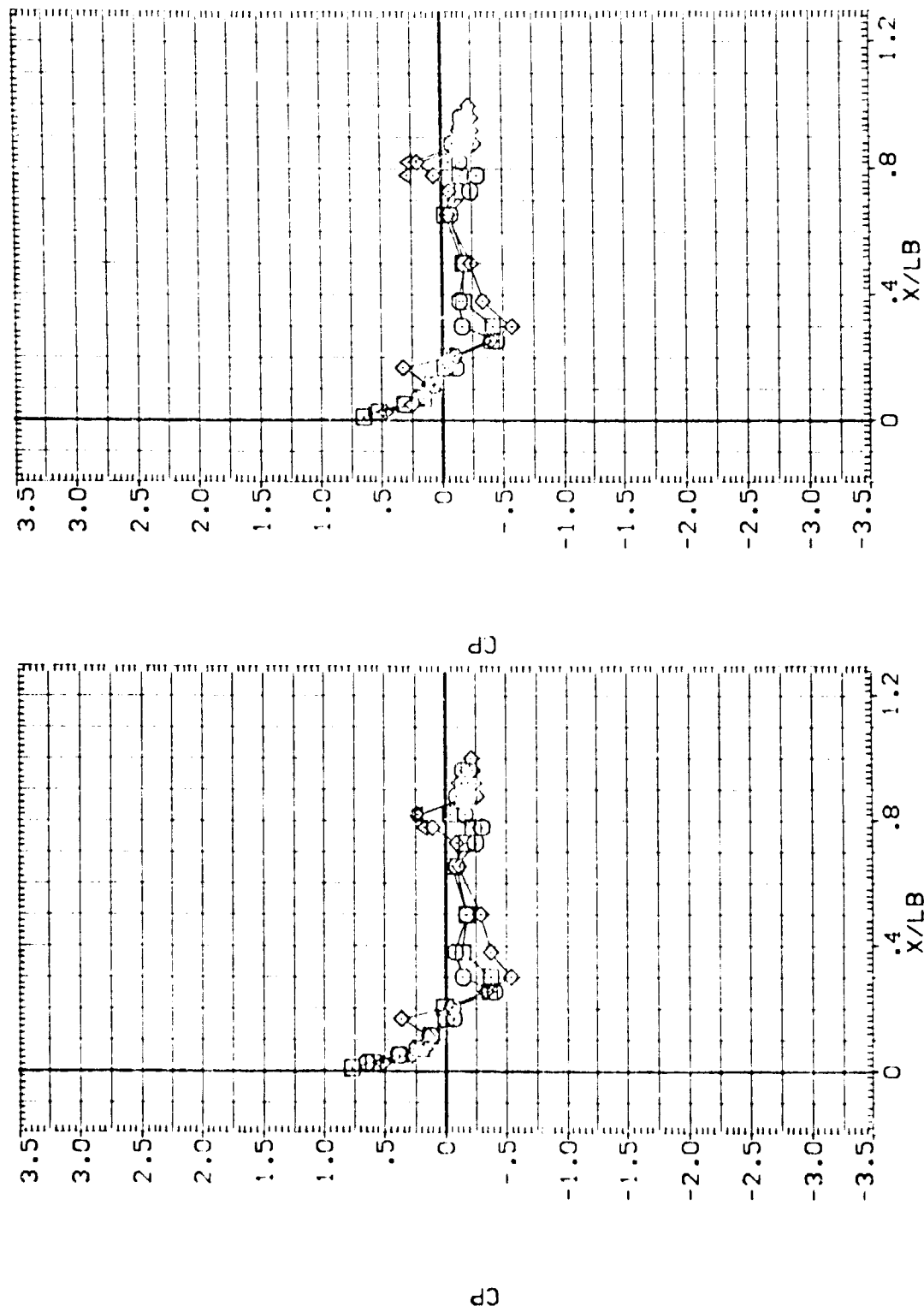


LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A4 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPDRY .000

SYMBOL PHI BETA0 ALPHA0
O 70.000 -2.030 7.830
◇ 90.000 .040
△ 120.000
△ 135.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

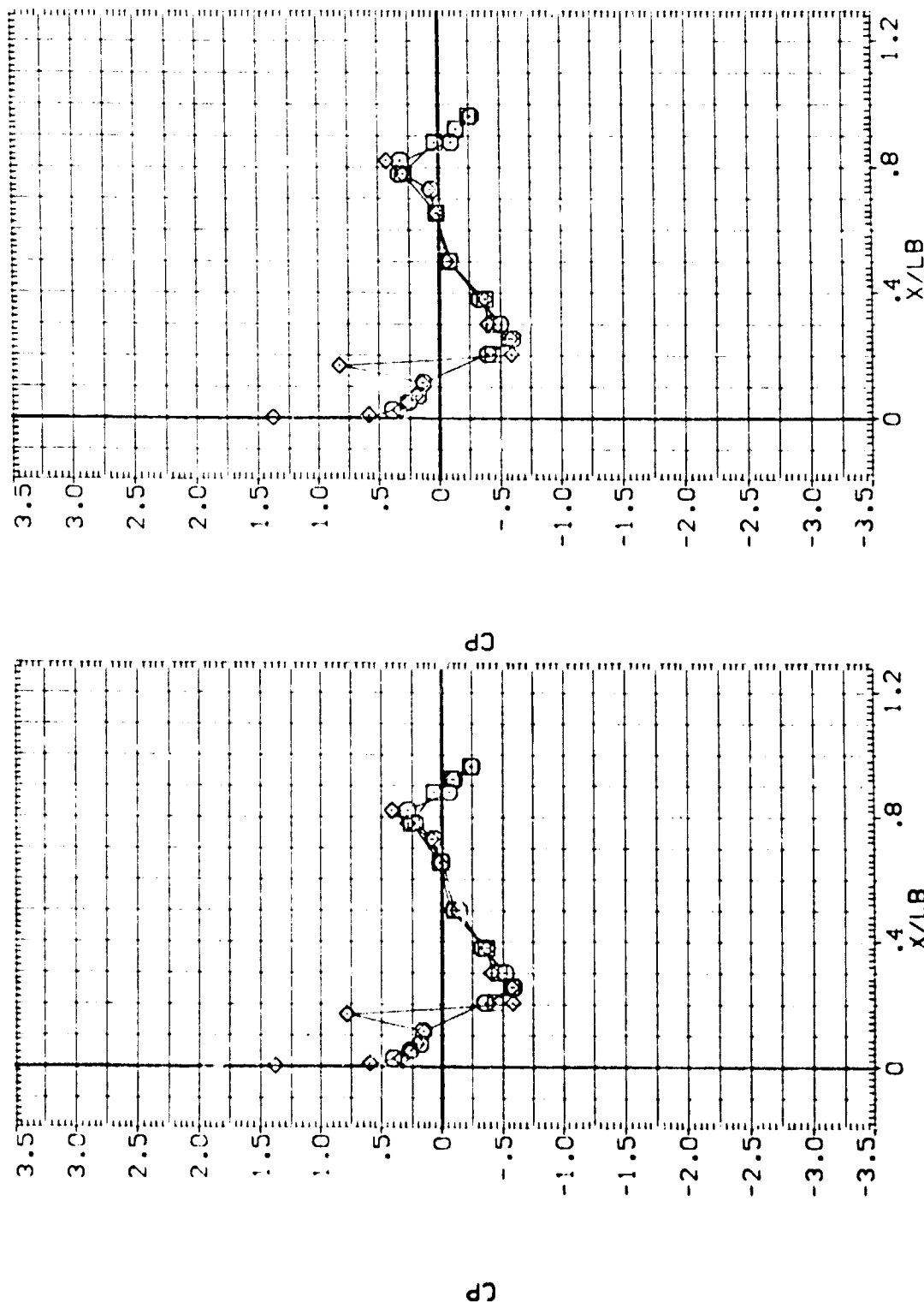
SYMBOL

PHI
150.000
165.000
180.000

BETA0
-2.030
.040

ALPHA0
7.830

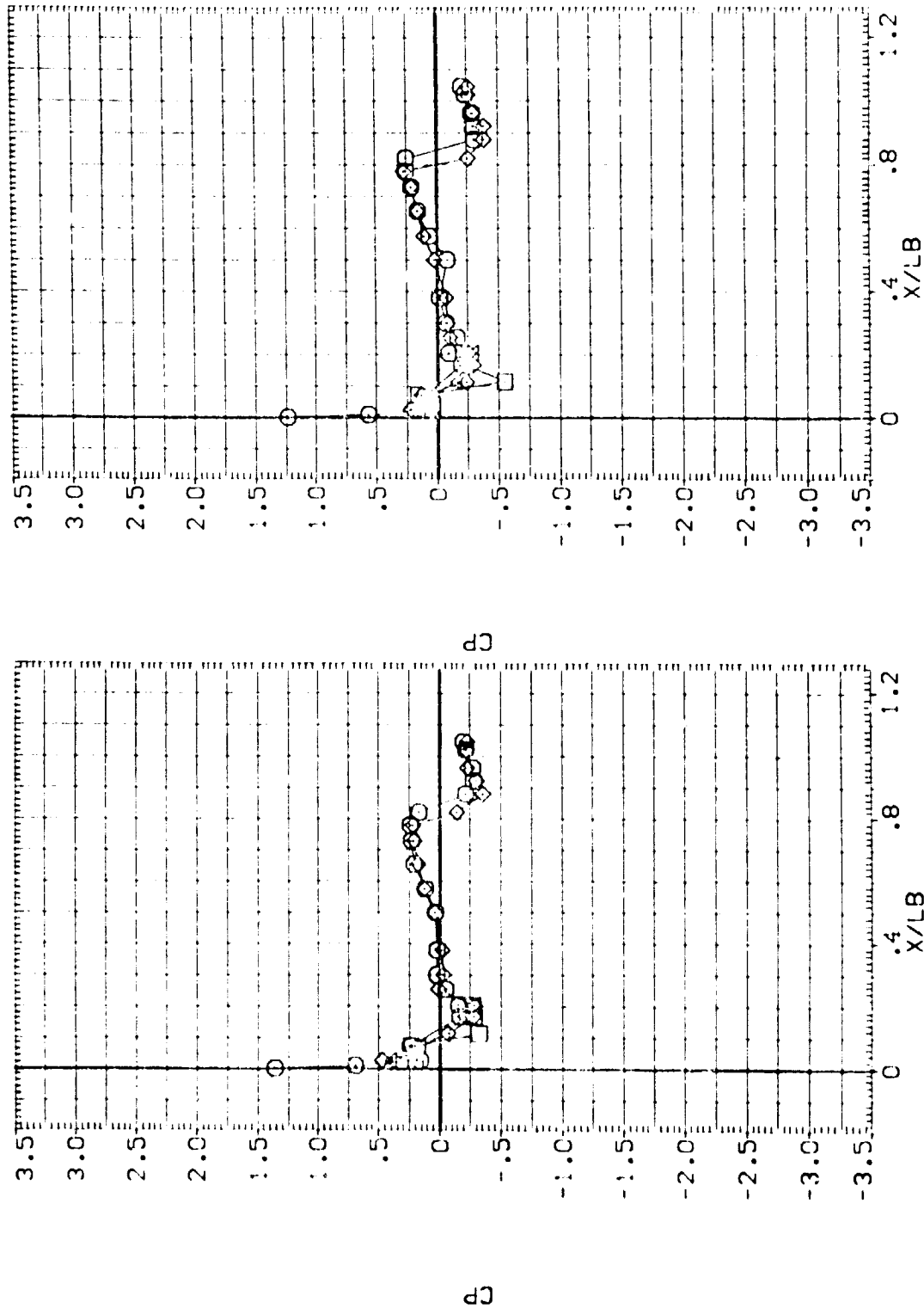
PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SP.99K .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES	
○	.000	4.060	7.870	MACH	1.250
◇	20.000	8.110		ELEVON	.000
△	40.000			RUDDER	.000
	55.000			SPOILER	.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:1-716 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1B33)

SYMBOL
 ○ □ ◇ △

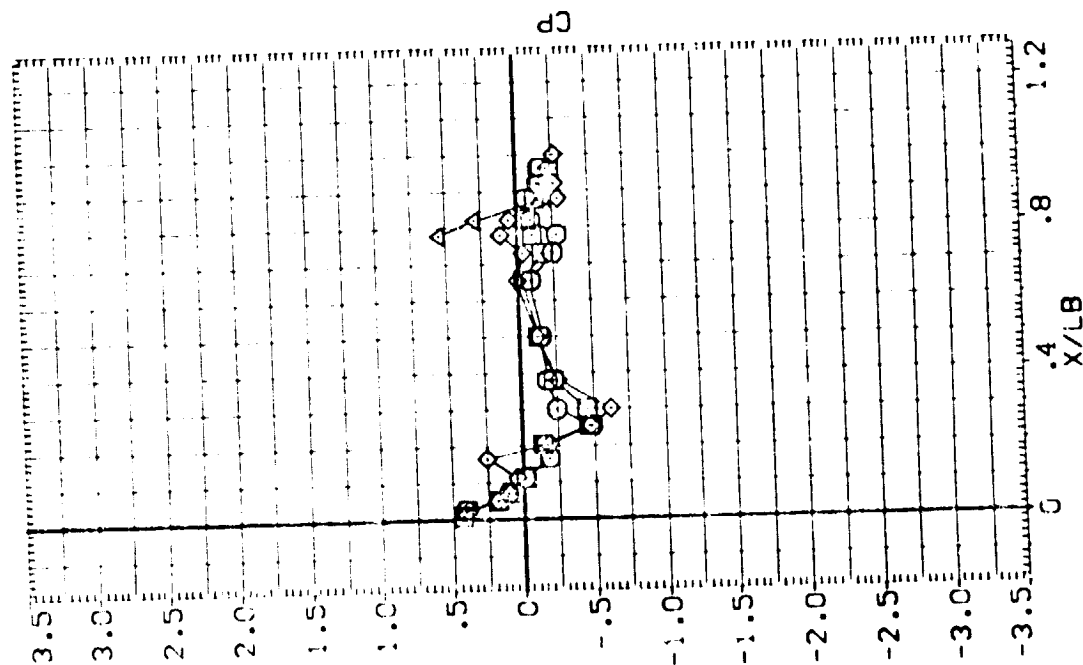
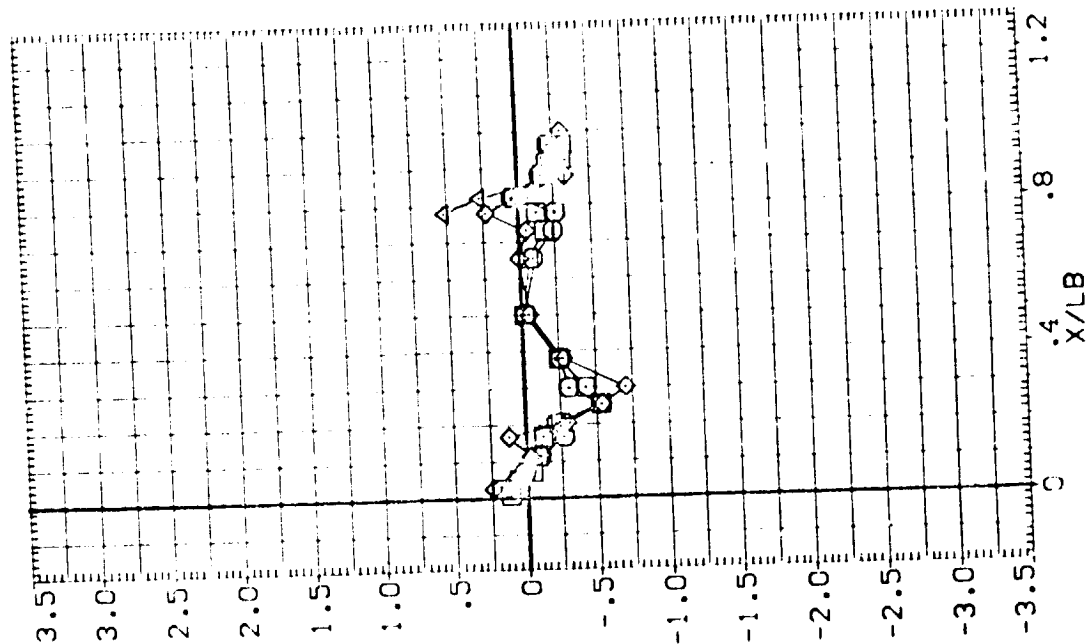
PHI
 70.000
 90.000
 120.000
 135.000

BETA0
 4.060
 8.110

ALPHA0
 7.870

MACH
 RUDDER

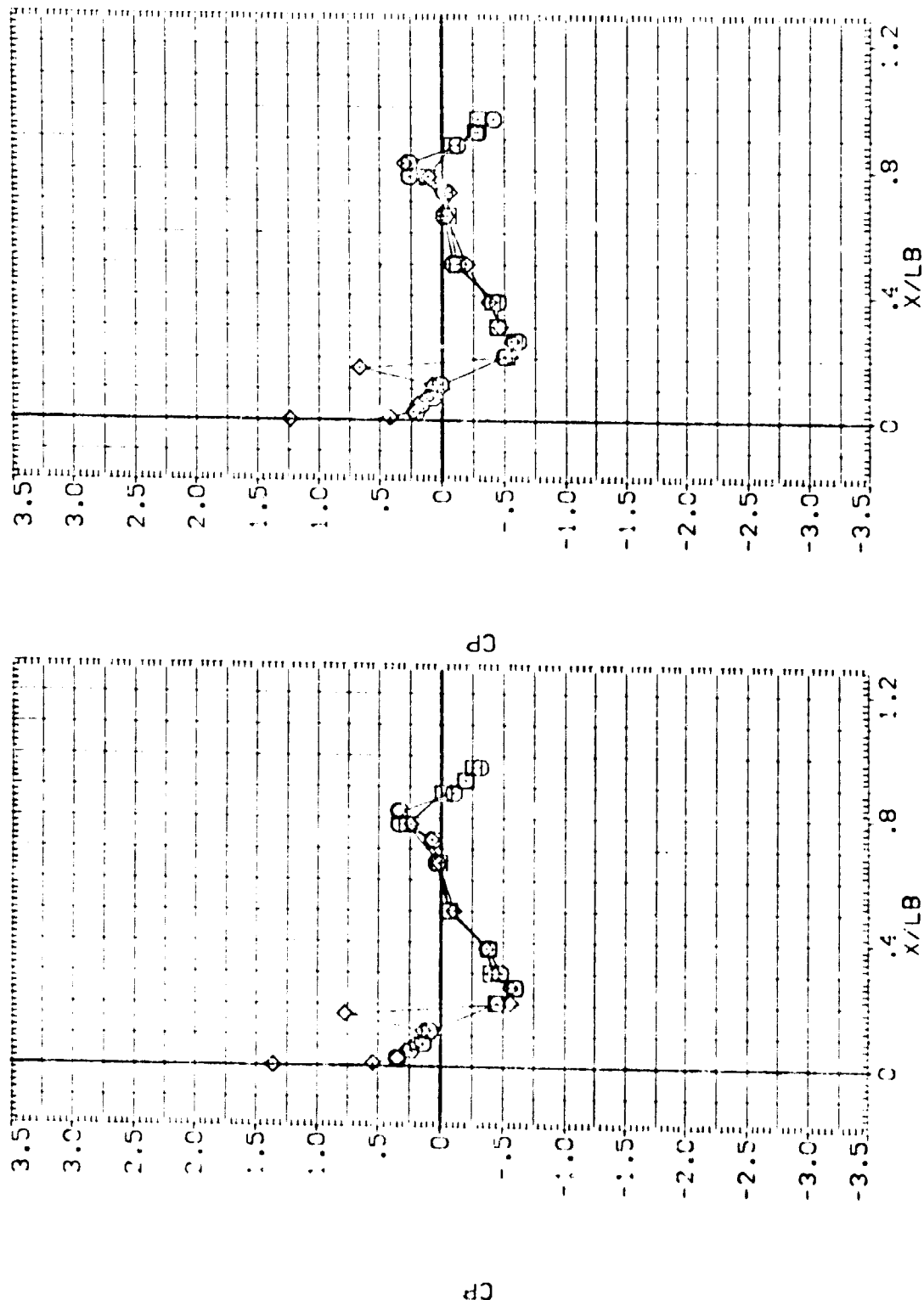
PARAMETRIC VALUES
 1.250
 .000
 ELEVON
 SPOBRK
 .000
 .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:-7:6 1A14 01+T12+S12N25+AT10 ORB. FUSELAGE (RB1933)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	SPDBRK
○	150.000	4.060	7.870	.000	.000	.000
◇	165.000	8.110		.000	.000	.000
◇	180.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 C1+T12+S12N25+AT11 ORB. FUSELAGE (RB1934)

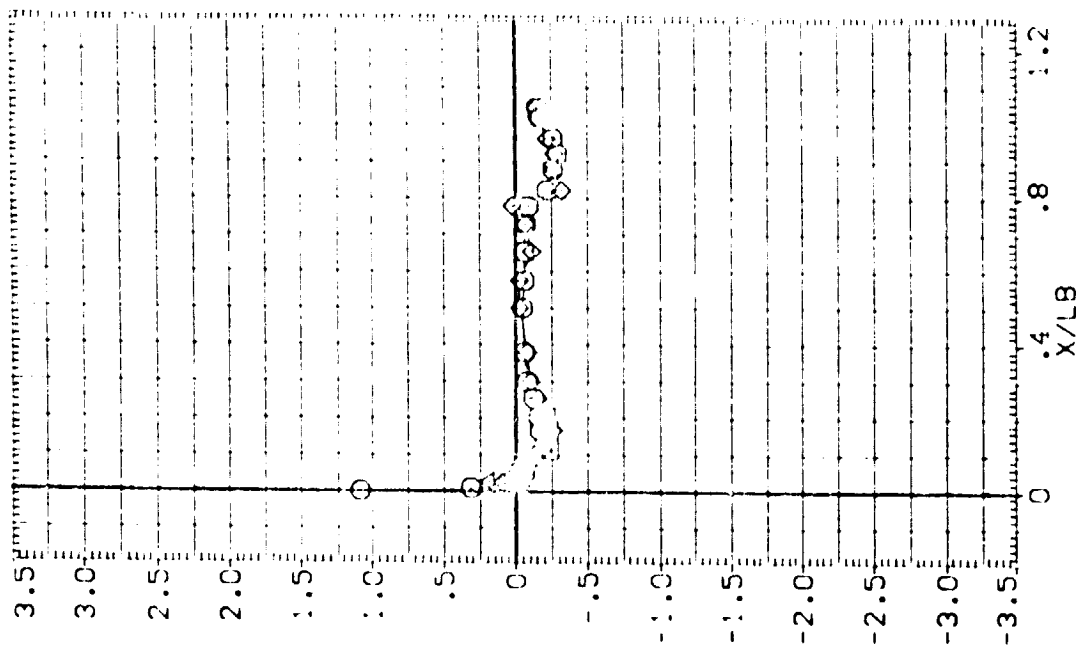
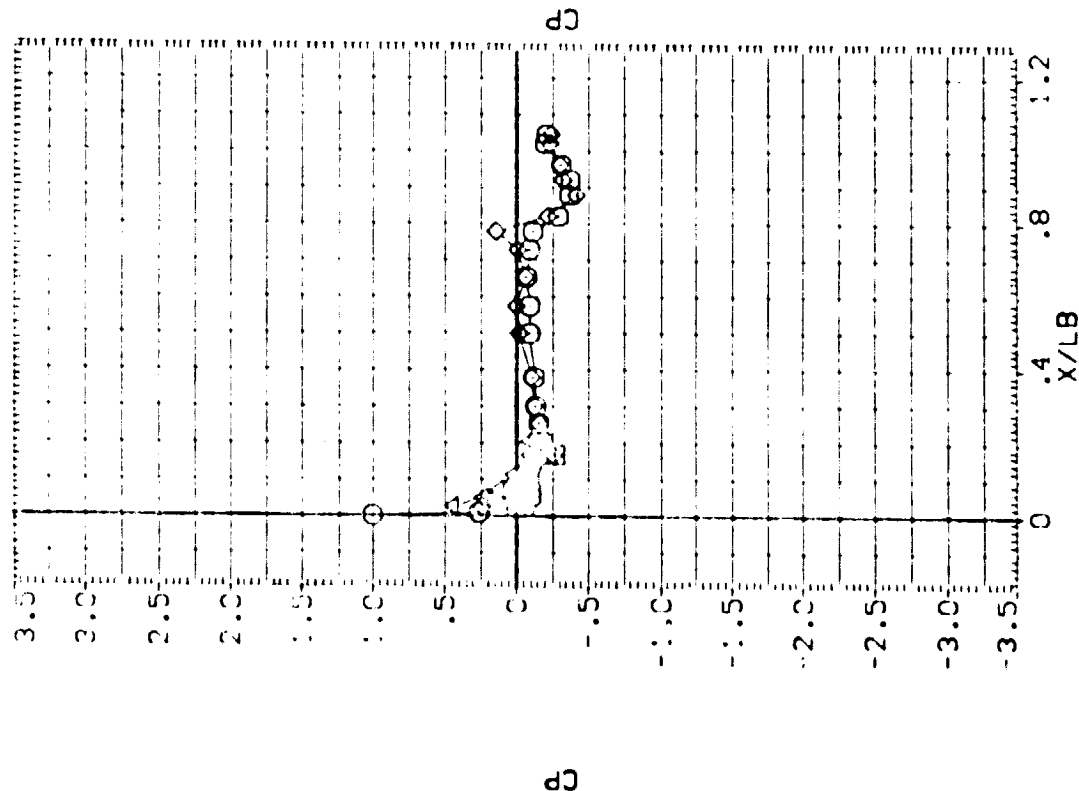
SYMBOL

PHI .000
20.000
40.000
55.000

BETA5
-7.980
.030

ALPHA0
-8.010

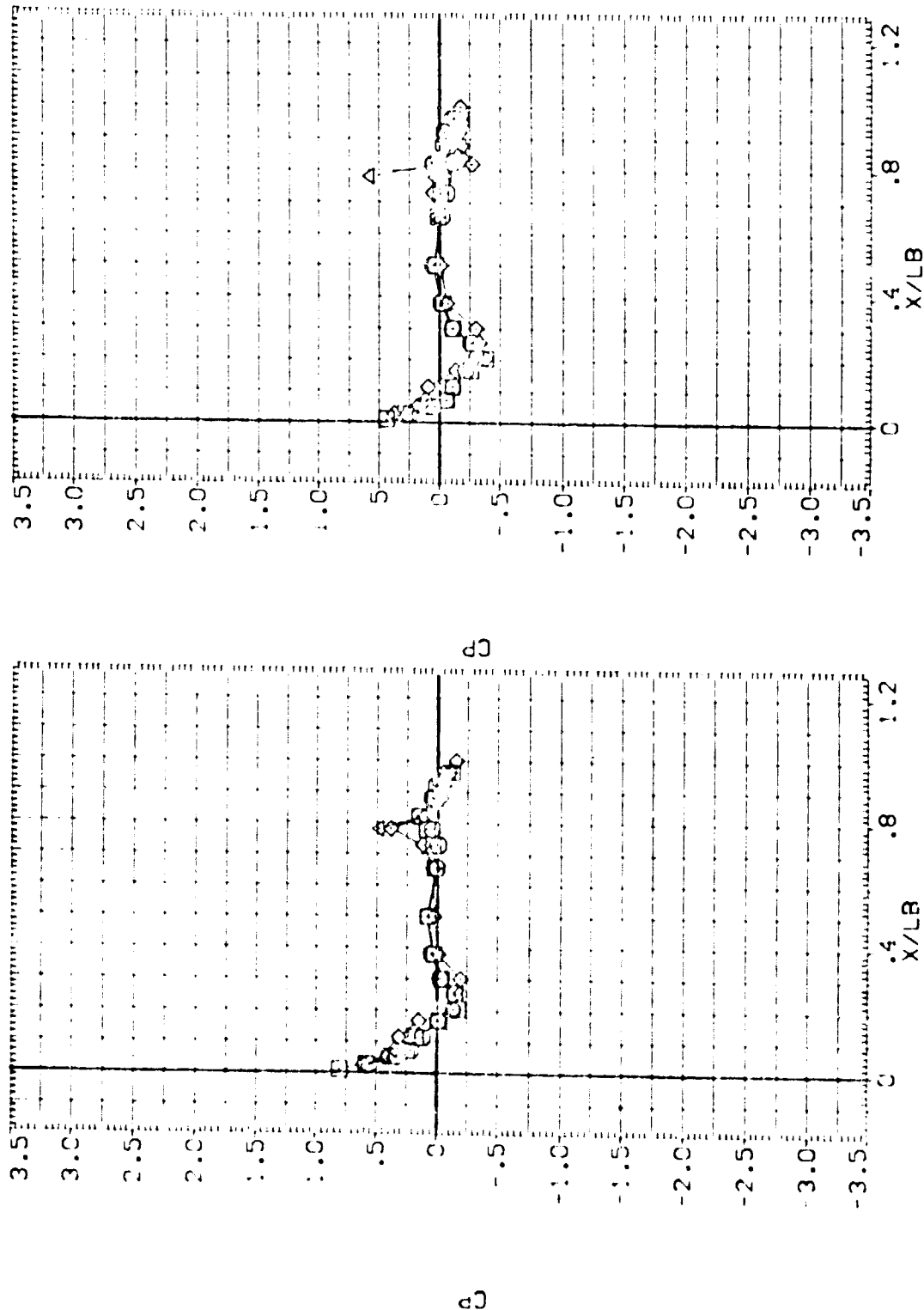
PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000 SPOON .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 ORB. FUSELAGE (RB1B34)

SYMBOL	PHI	BETAC	ALPHA0	PARAMETRIC VALUES		
				MACH	ELEVCH	
○	70.000	-7.980	-8.010	RUDER	.000	SPOSRK
◇	90.000				.000	
△	120.000					
▽	135.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-7.6 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B34)

SYMBOL

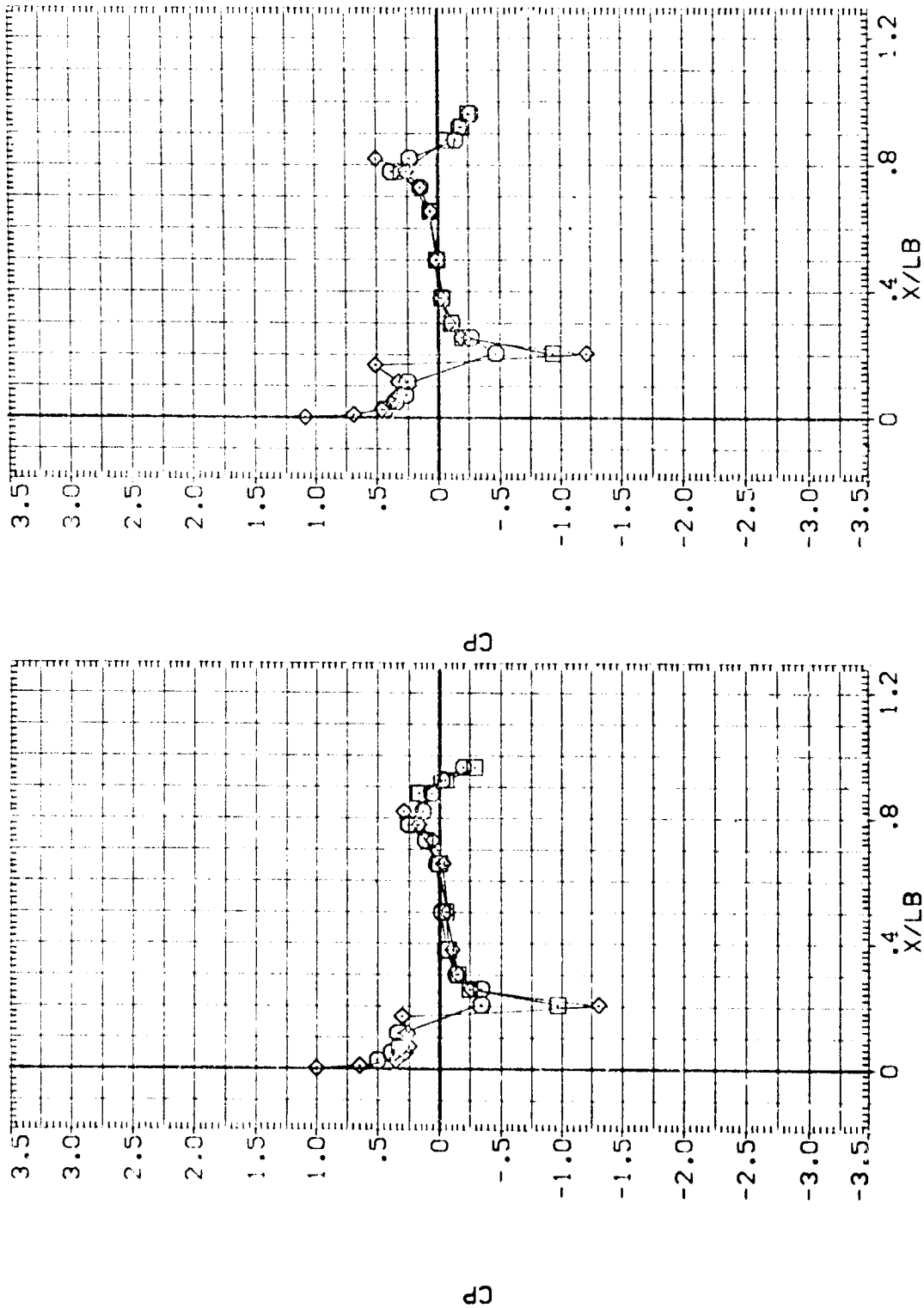
PHI
150.000
165.000
180.000

BETAG
-7.980
.030

ALPHA0
-8.010

PARAM. IRIC VALUES

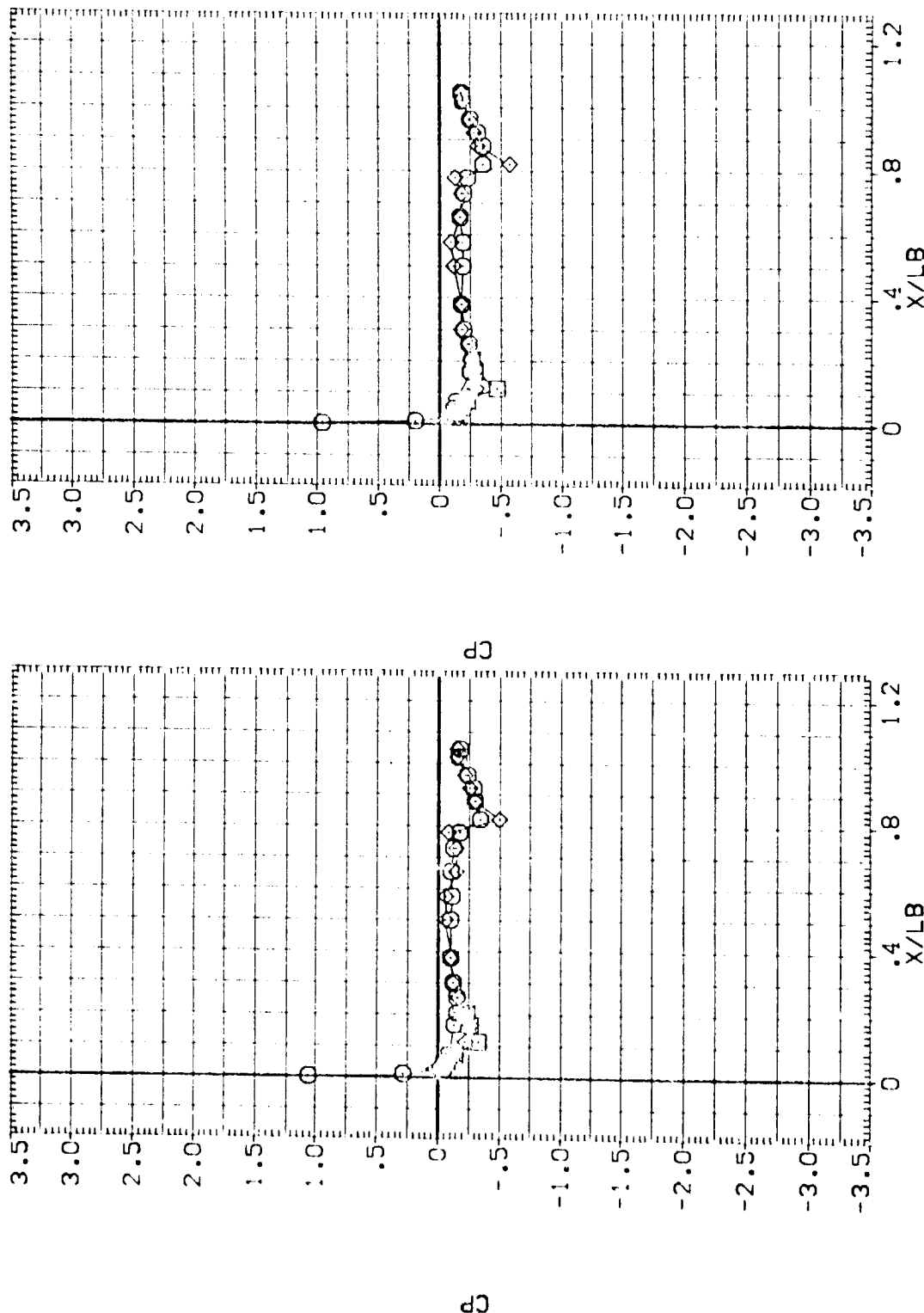
MACH
RUDDER
.000
ELEVON
SPDRBK
.000
.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B34)

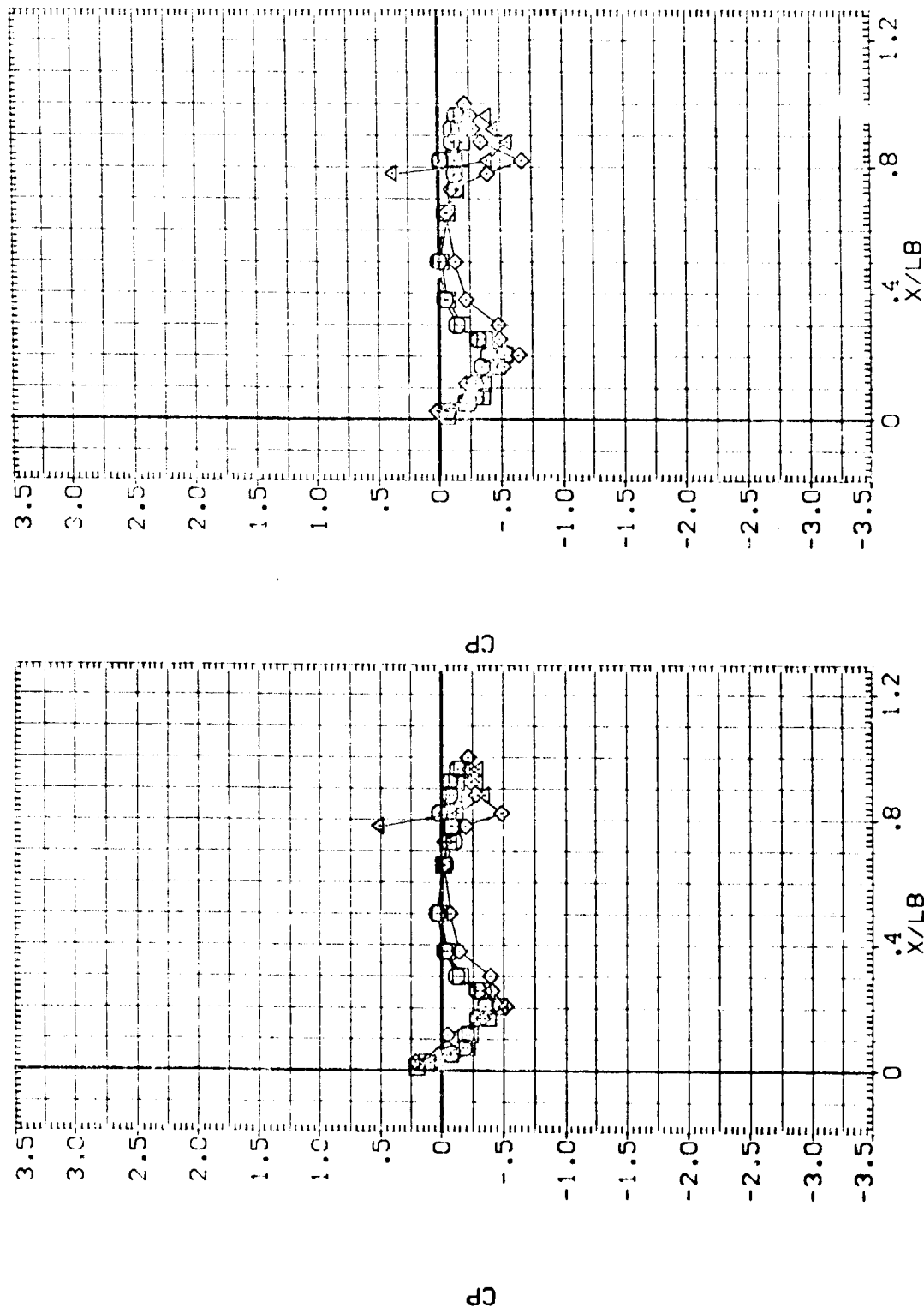
MO.	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEV	SPDRK
0	.000	4.090	-8.000	.600	.000	.000
1	20.000	8.130		.000		
2	40.000					
3	55.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1934)

SYMBOL	PHI	BETA	ALPHA	MACH	ELEVON	SPOBRK
○	70.000	4.090	-8.000	.600	.000	.000
□	90.000	8.130		.000		
◇	120.000					
△	135.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B34)

SYMBOL

○
□
◇

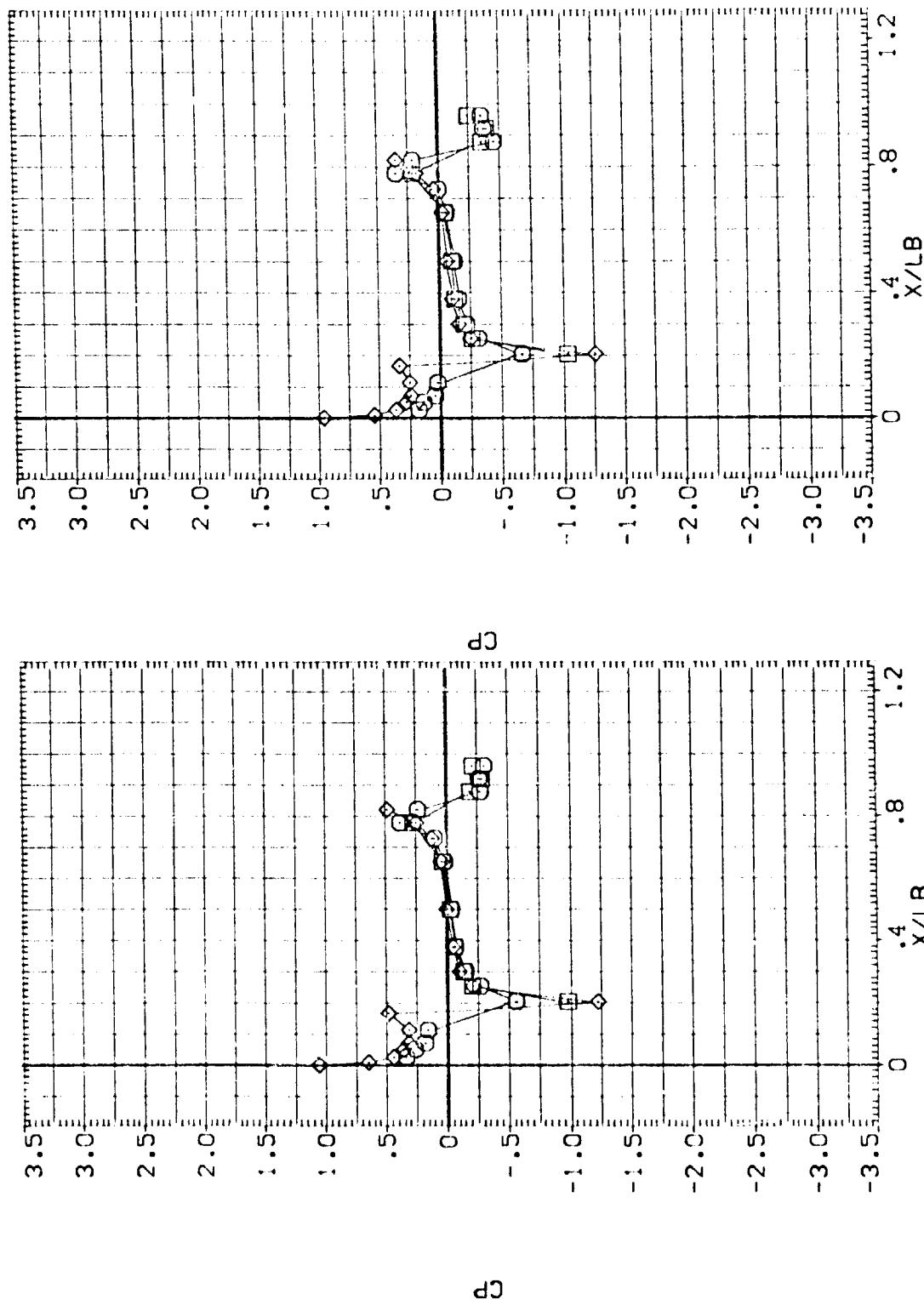
PHI
150.000
165.000
180.000

BETAG
4.090
8.130

ALPHA0
-8.000

PARAMETRIC VALUES

MACH .600 ELEVON .000
RUDDER .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B34)

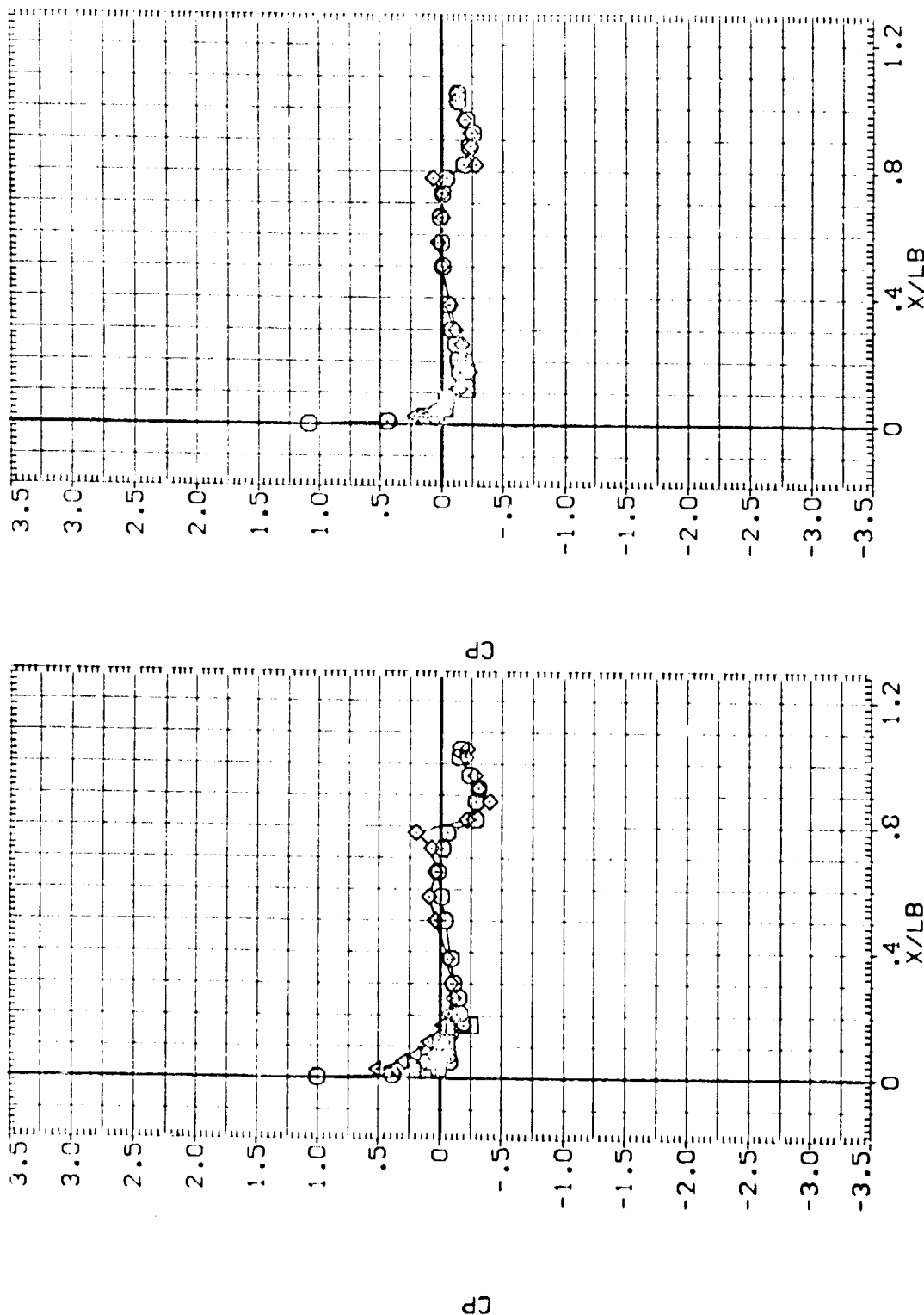
SYMBOL
O
□
△

PHI .000
20.000
40.000
55.000

BETA0 -8.030
.030

ALPHA0 -3.10

PARAMETRIC VALUES
MACH .500
RUDDER .000
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 ORB. FUSELAGE (RB1B34)

SYMBOL

○ □ ◇ △

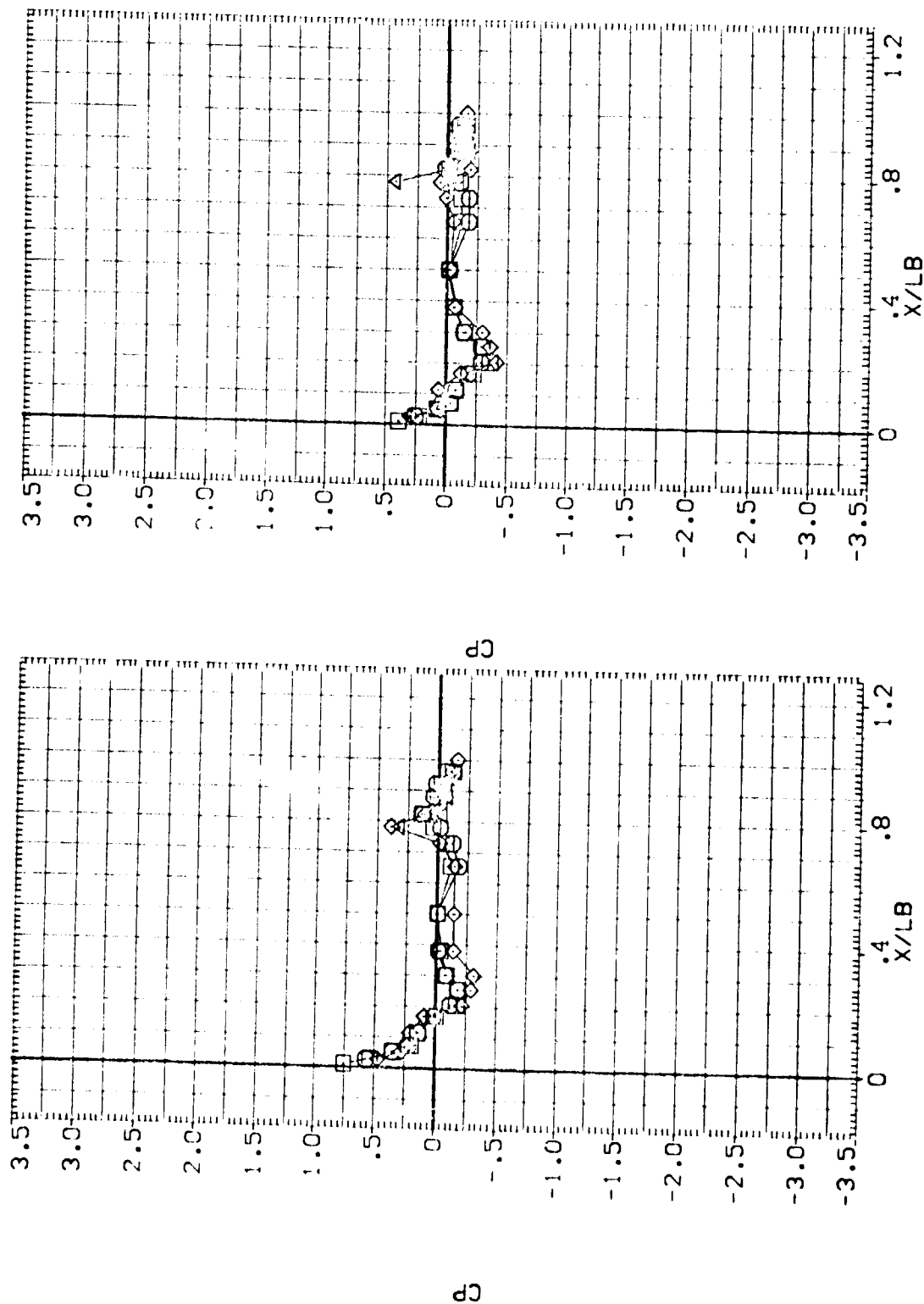
PHI 70.000
90.000
120.000
135.000

BETA0 -8.030
.030

ALPHA0 -.310

MACH .600
RUDDER .000

ELEVON .000
SPDBRK .000



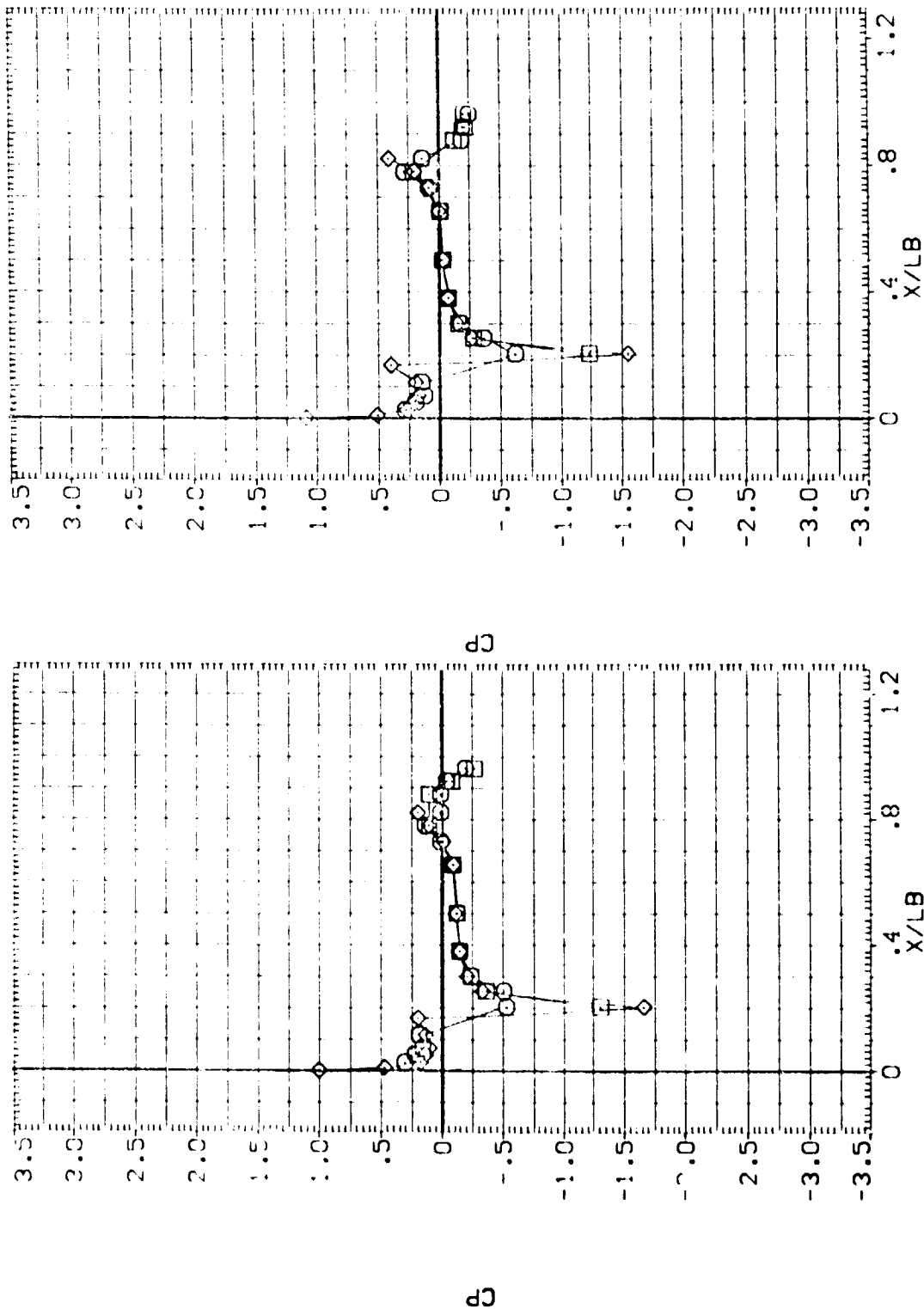
LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B34)

SYMBOL
 ○
 □
 ◇

PHI BETA0 ALPHA0
 150.000 -8.030 -.310
 165.000 .030
 180.000

PARAMETRIC VALUES
 MACH .600 ELEVON .000
 RUDDER .000 SPOON .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 ORB. FUSELAGE (RB1B34)

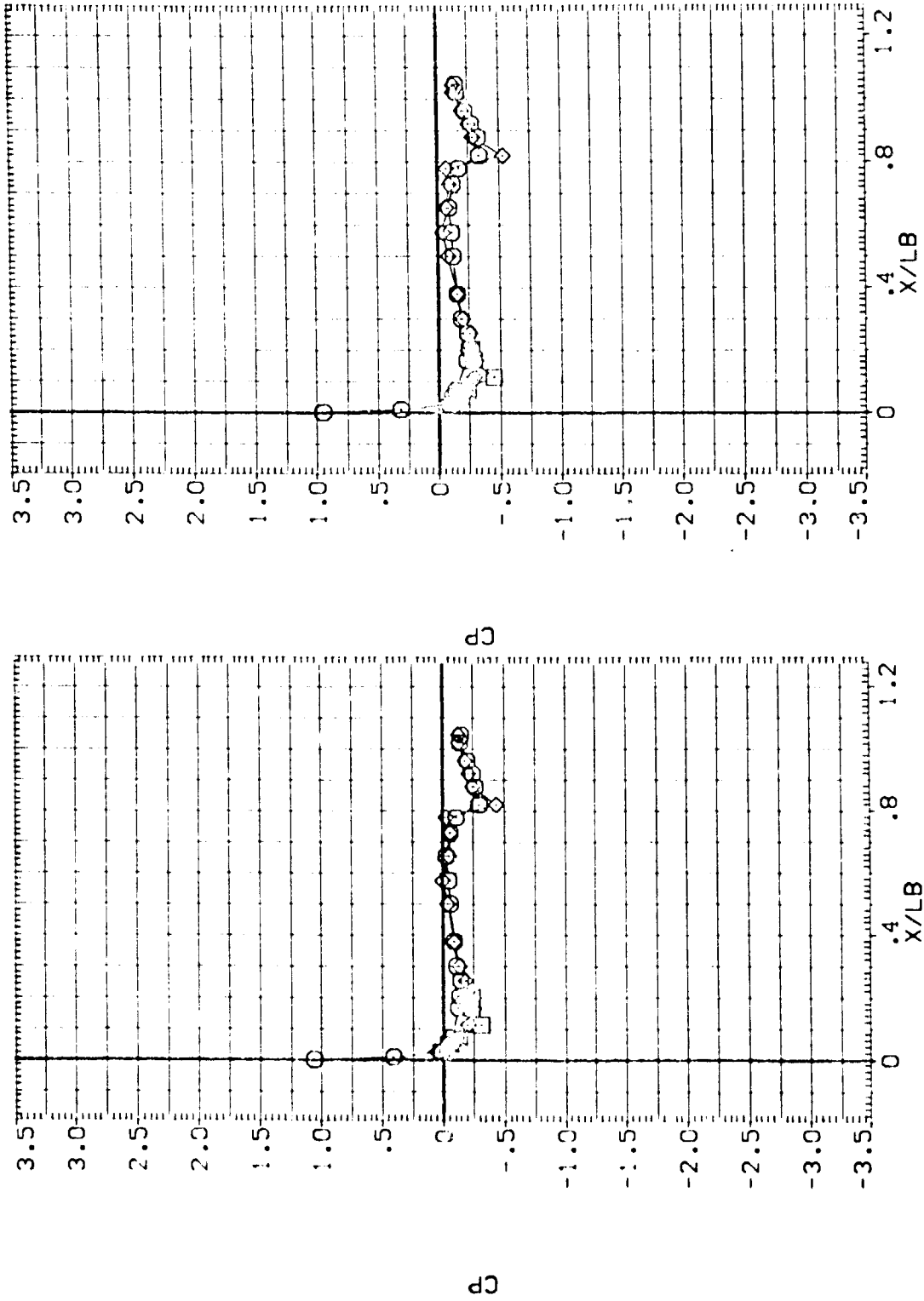
SYMBOL
 ○
 ◇
 △

PHI
 .000
 20.000
 40.000
 55.000

BETA
 4.080
 8.110

ALPHA
 -.320

PARAMETRIC VALUES
 MACH .600 ELEVON .000
 RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB:B34)

SYMBOL

○

◇

PHI

70.000
90.000
120.000
135.000

BETAC

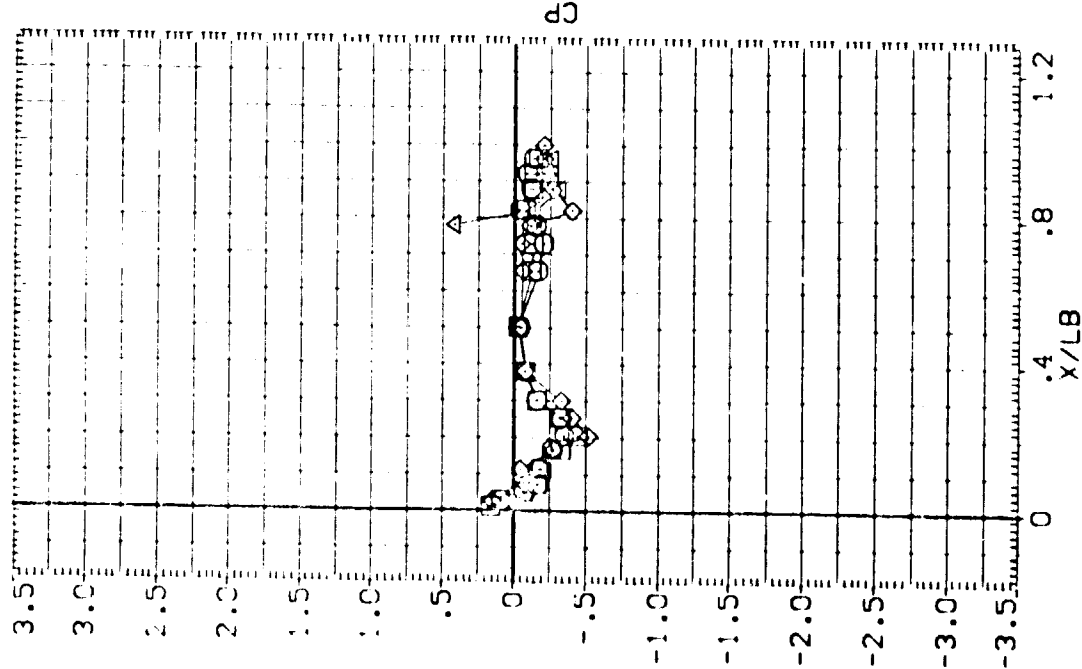
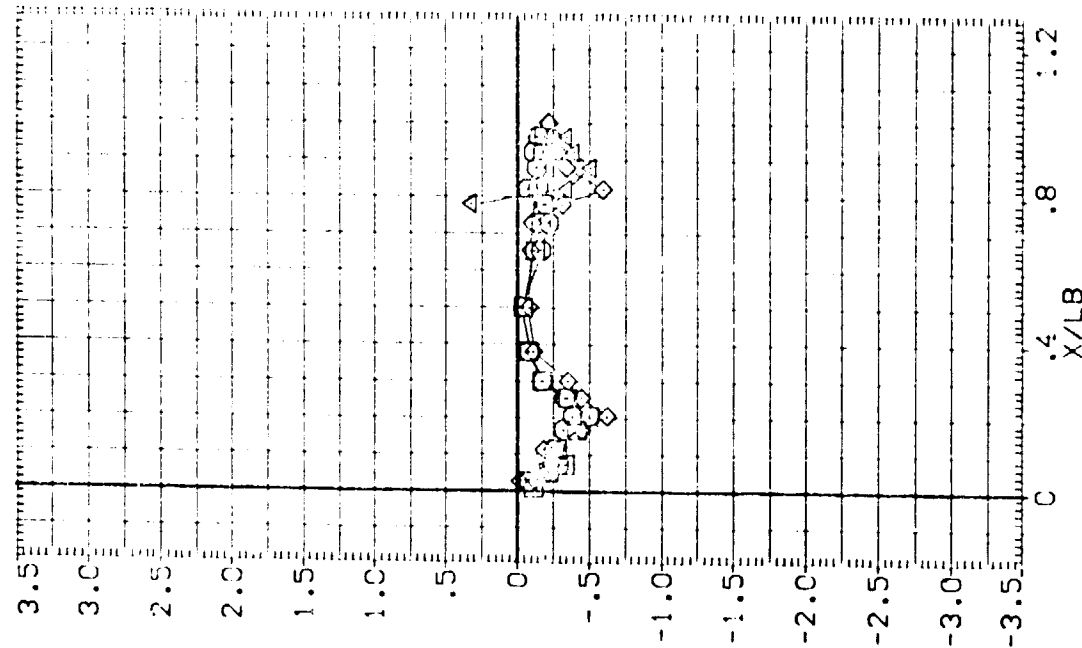
4.080
8.110

ALPHA

-3.320

PARAMETRIC VALUES

MACH .600 ELEVON .000
RUDDER .000 SPOBRK .300



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:1-7:6 1A:4 01+T12+S12N25+AT11 0R9. FUSELAGE (R81B34)

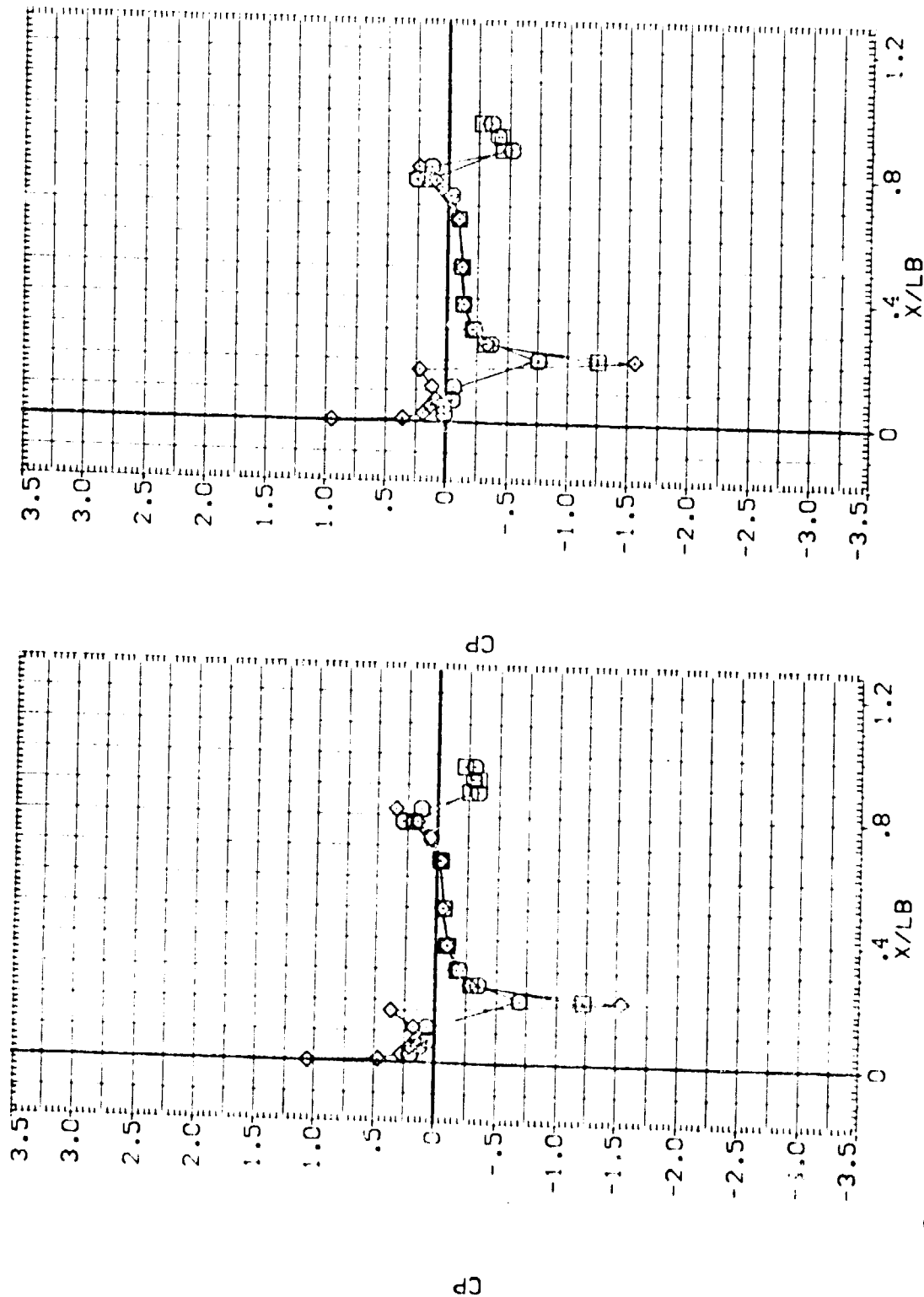
SYMBOL
 ○
 ◇

PHI 150.000
 165.000
 180.000

BETA 4.080
 8.110

ALPHA 0
 -3.20

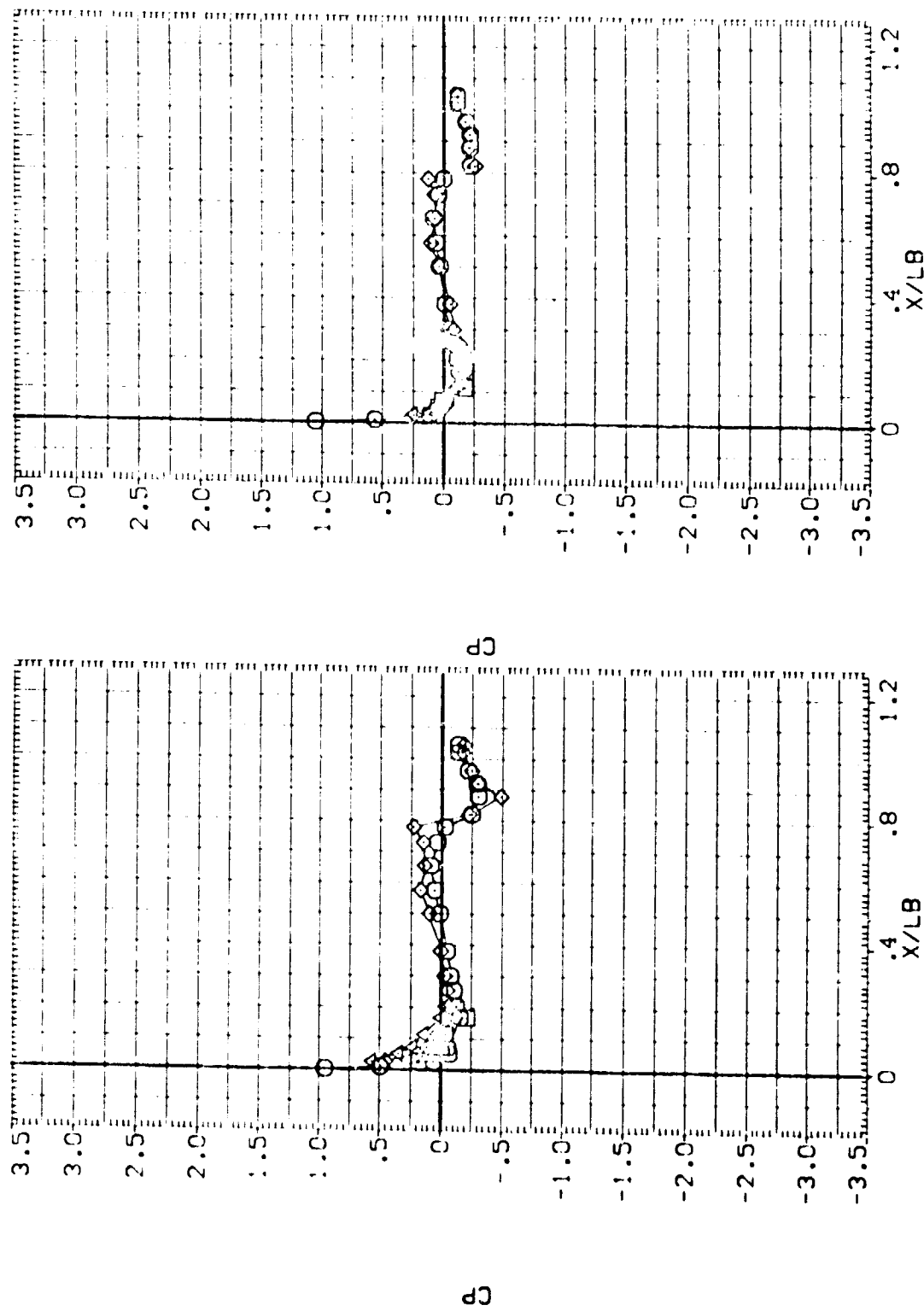
PARAMETRIC VALUES
 MACH .800
 RUDDER .000
 ELEVON .000
 SPOON .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S:2N25+AT11 ORB. FUSELAGE (RB1B34)

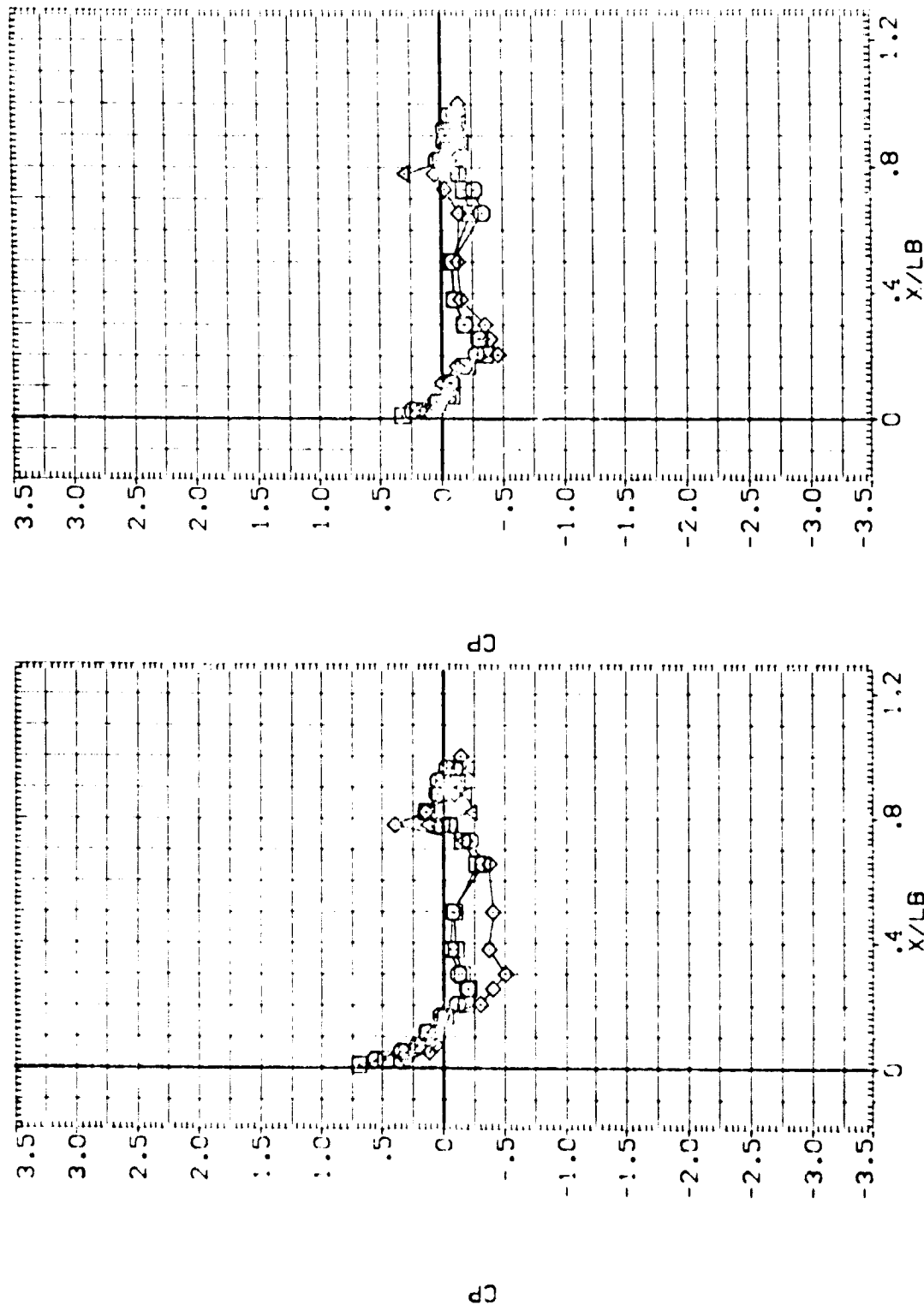
SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES
○	.000	-8.010	7.890	MACH .600 ELEV. .000
◇	20.000	.040		RUDDER .000 SPOBR. .000
◇	40.000			
△	55.000			



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B34)

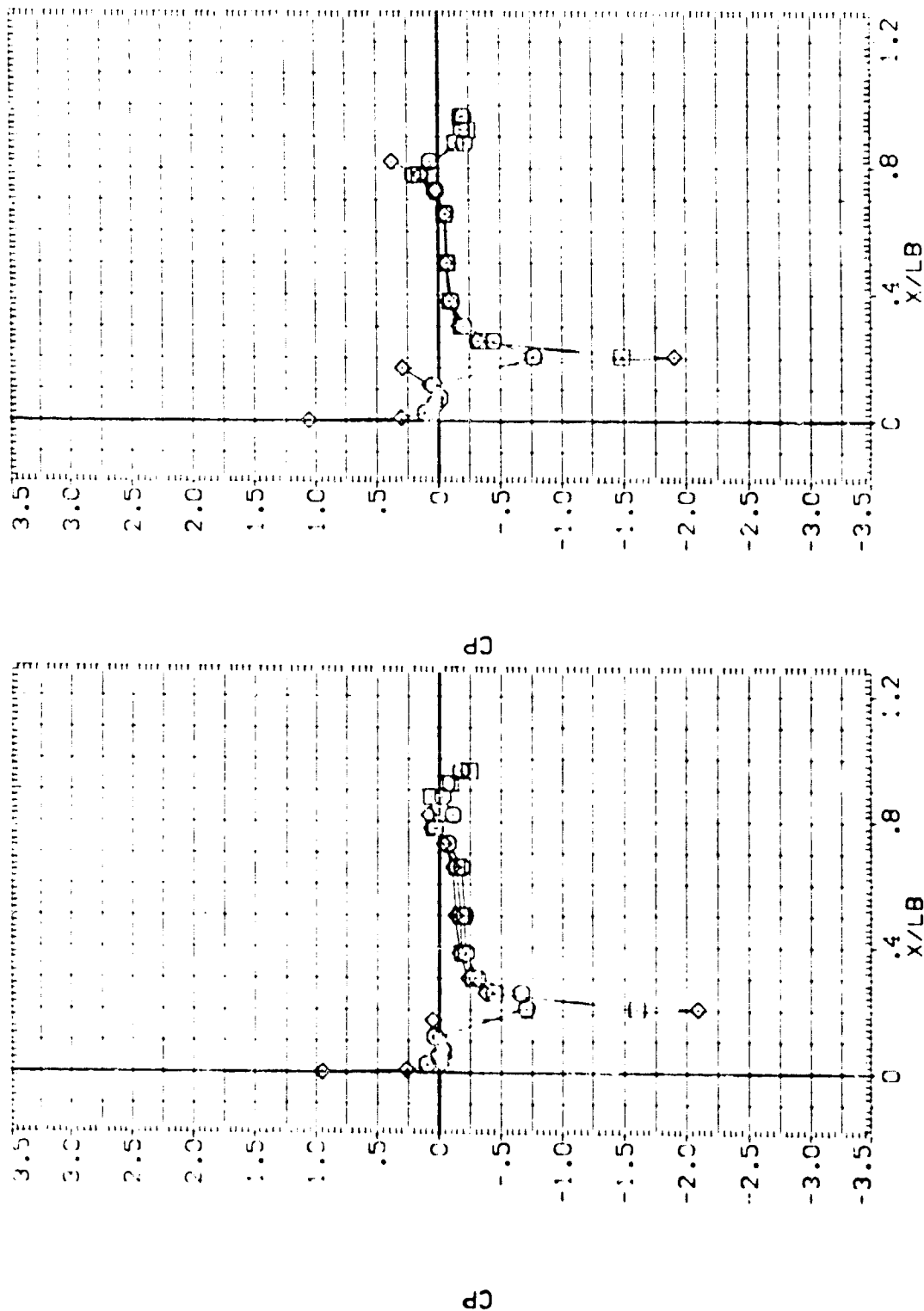
SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES	
○	70.000	-8.010	7.890	MACH	.600
□	90.000	.040		ELEVON	.000
◇	120.000			RUDDER	.000
△	135.000			SPOILER	.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 CR6. FUSELAGE (R81B34)

SYMBOL	PHI	BETAS	ALPHAS	MACH	PARAMETRIC VALUES
○	150.000	-8.010	7.890	R00R	.500 ELEVON .000
◇	165.000	.040			.000 SPOON .000
◇	180.000				

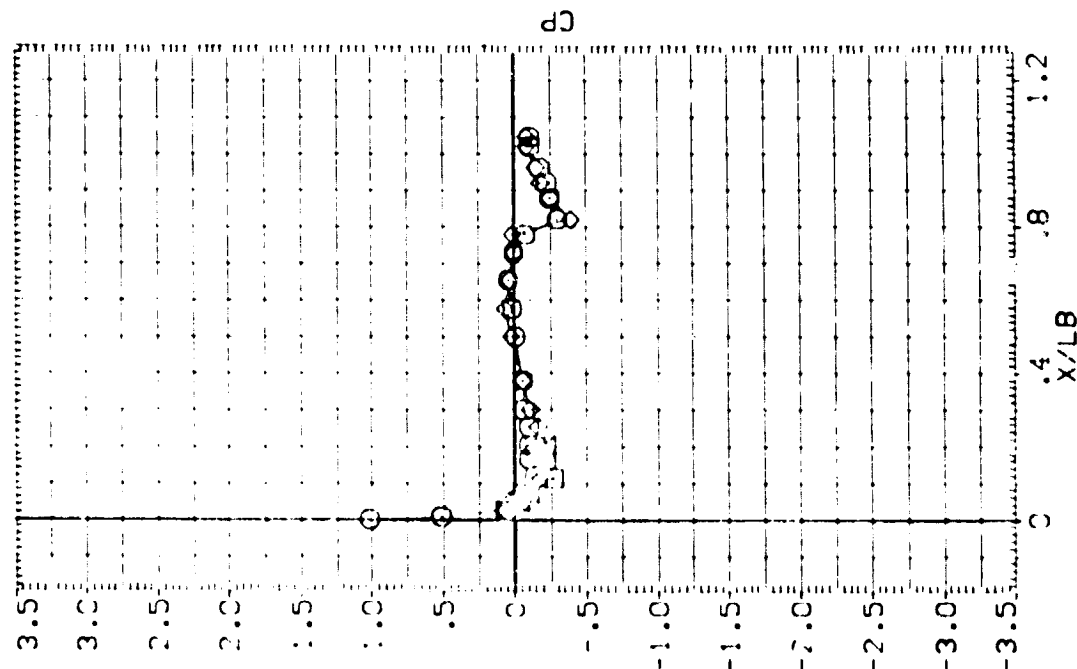
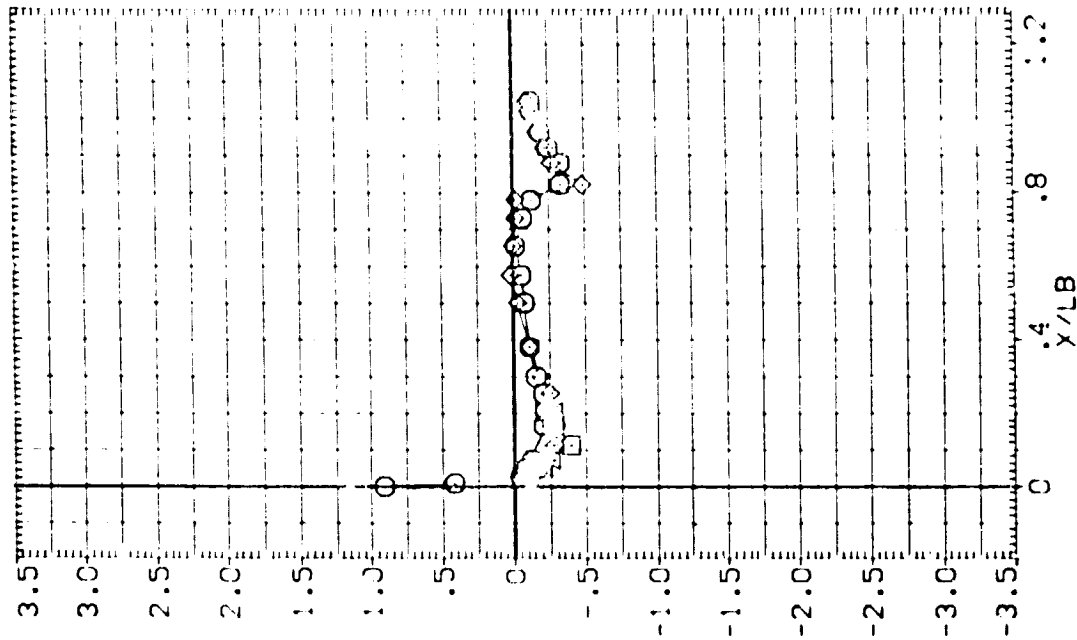


LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC: 7:16 1A14 C1:T:2+S:2N25+AT1: ORB. FUSELAGE (RB1B34)

PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000 SPEED .000

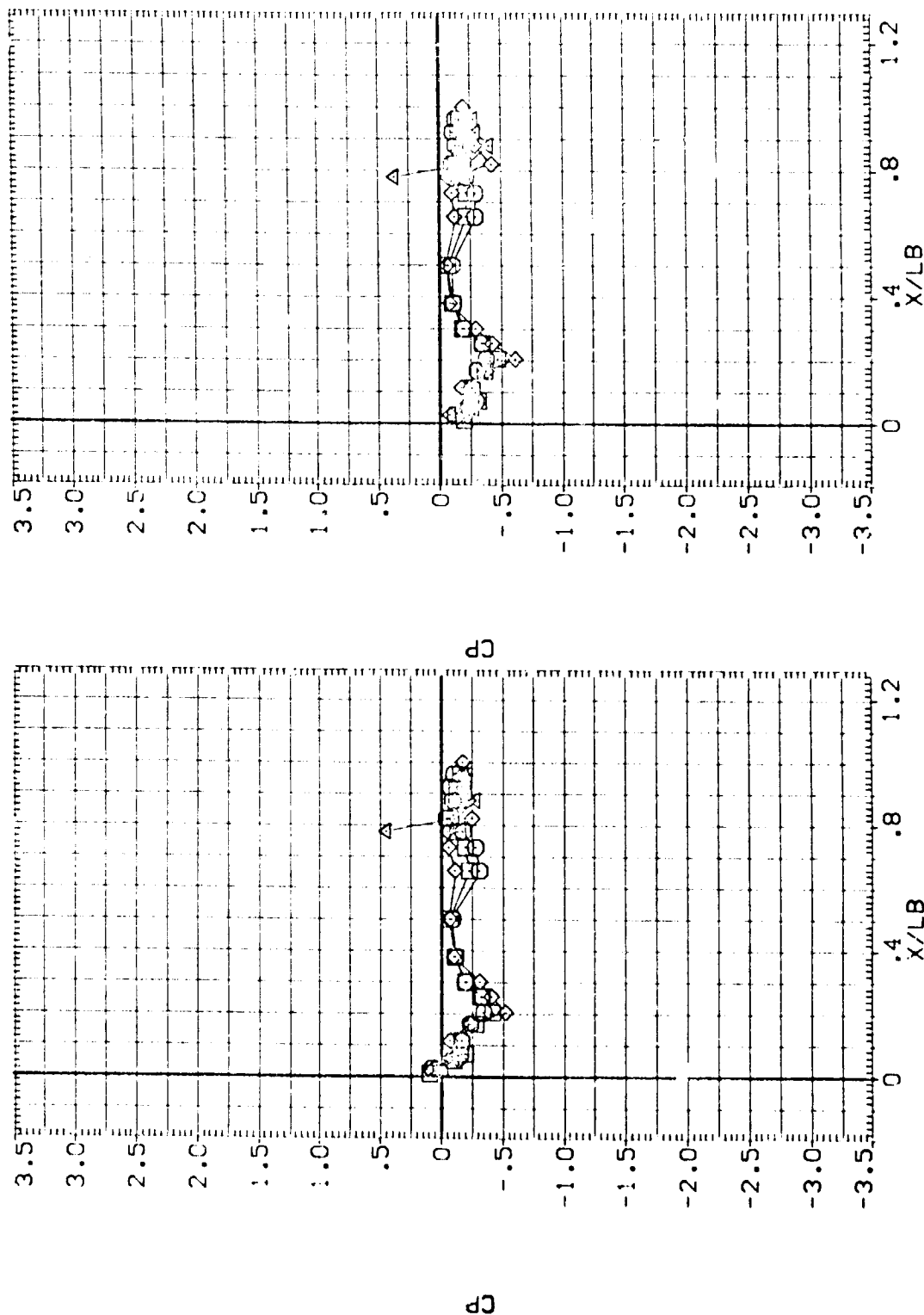
SYMBOL PW: BETAO ALPHAO
O .000 4.100 7.500
X 20.000 8.170
Y 40.000
Z 55.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01:T:2+S:2N25+AT11 ORB. FUSELAGE (RB1934)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEV	SPDR
○	70.000	4.100	7.900	.600	.000	.000
□	90.000	8.170		.000	.000	.000
◇	120.000					
△	135.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B34)

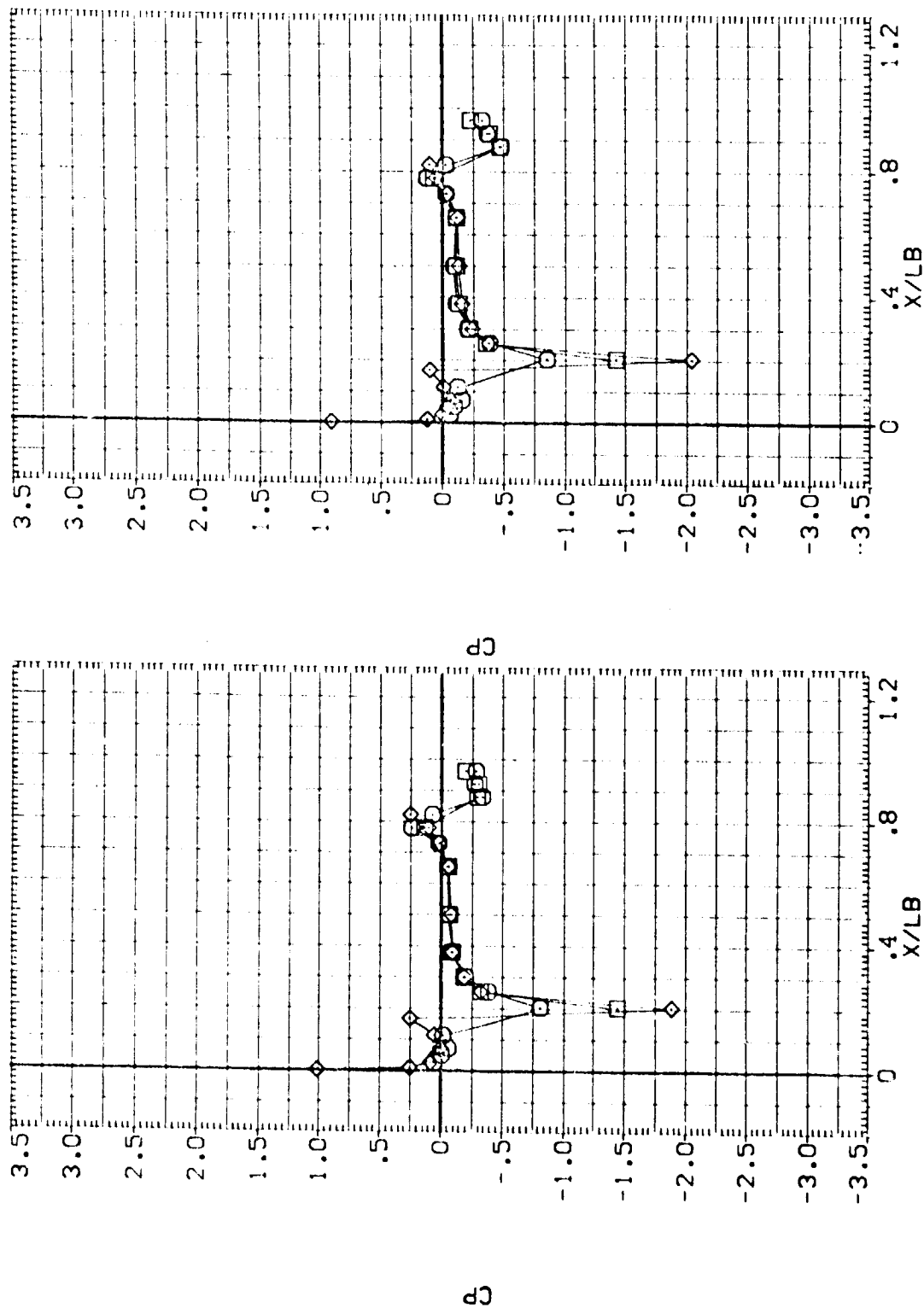
SYMBOL

PHI
150.000
165.000
180.000

BETA
4.100
8.170

ALPHA
7.900

PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

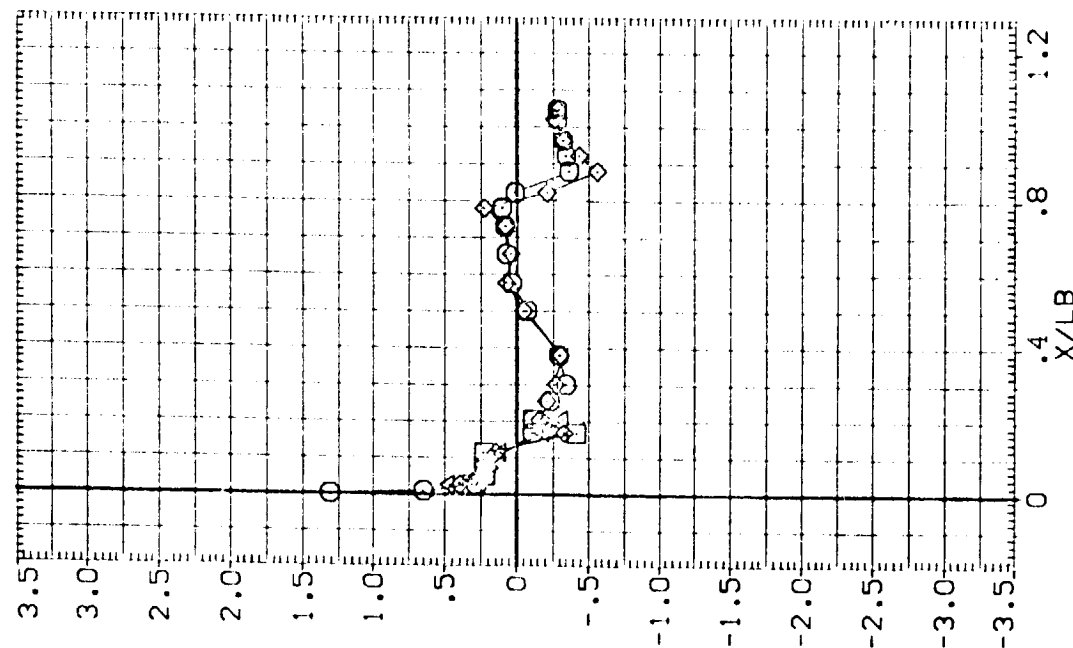
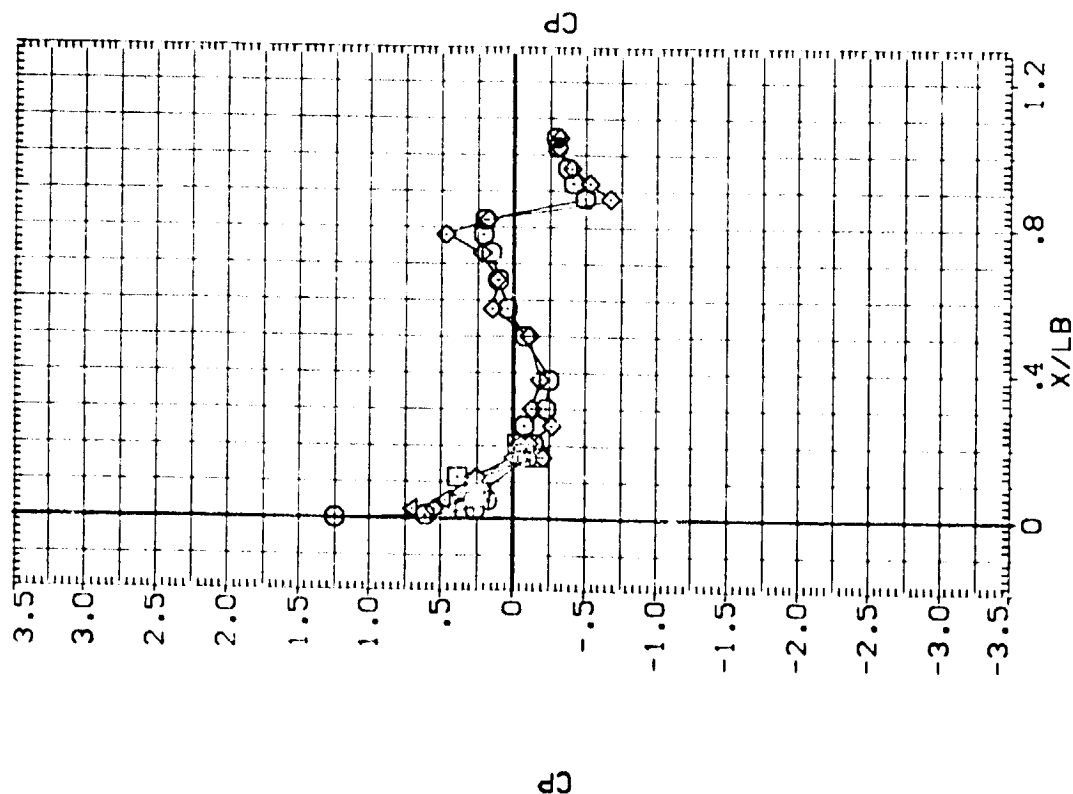
SYMBOL
 ○ □ ◇ △

PHI .000
 20.000
 40.000
 55.000

BETA0 -8.020
 .030

ALPHA0 -8.080

PARAMETRIC VALUES
 MACH 1.050
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

SYMBOL
○
◇
△

PHI
70.000
90.000
120.000
135.000

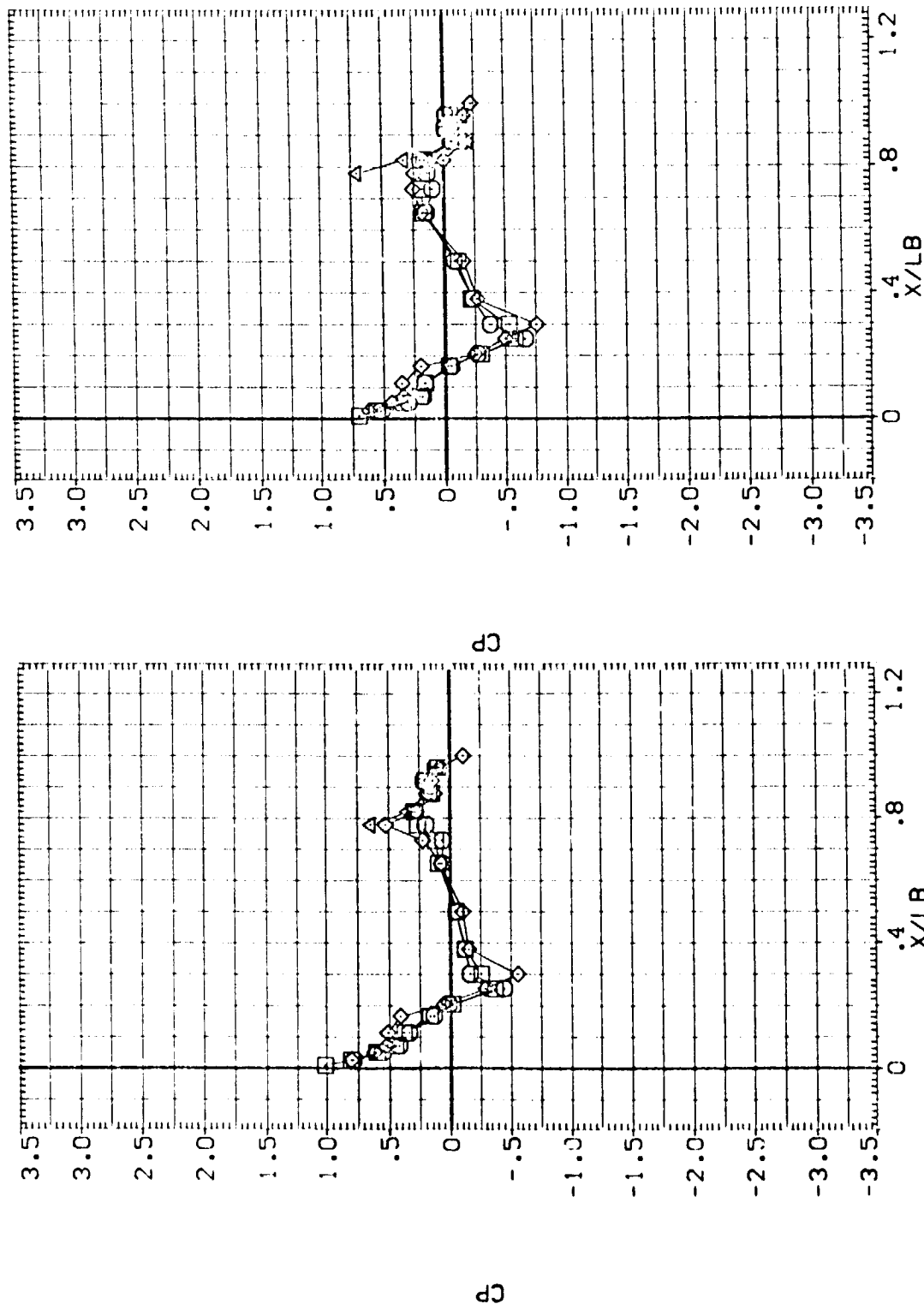
BETA0
-8.020
.030

ALPHA0
-8.080

MACH
RUDDER

PARAMETRIC VALUES
1.050
.000

ELEVON
SPECBK
.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-71S 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

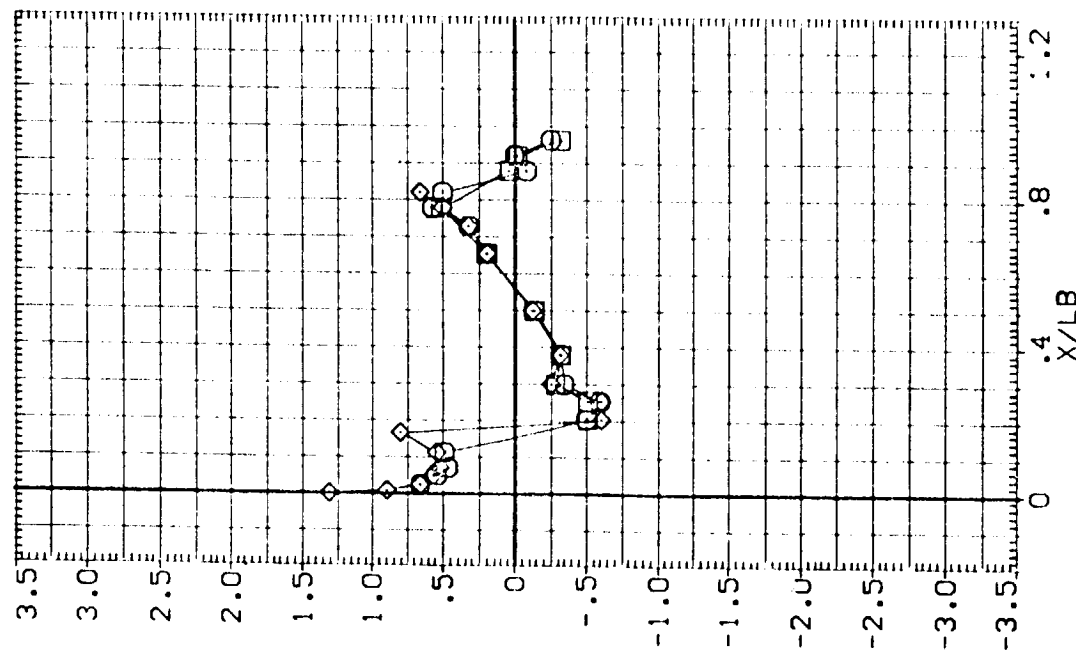
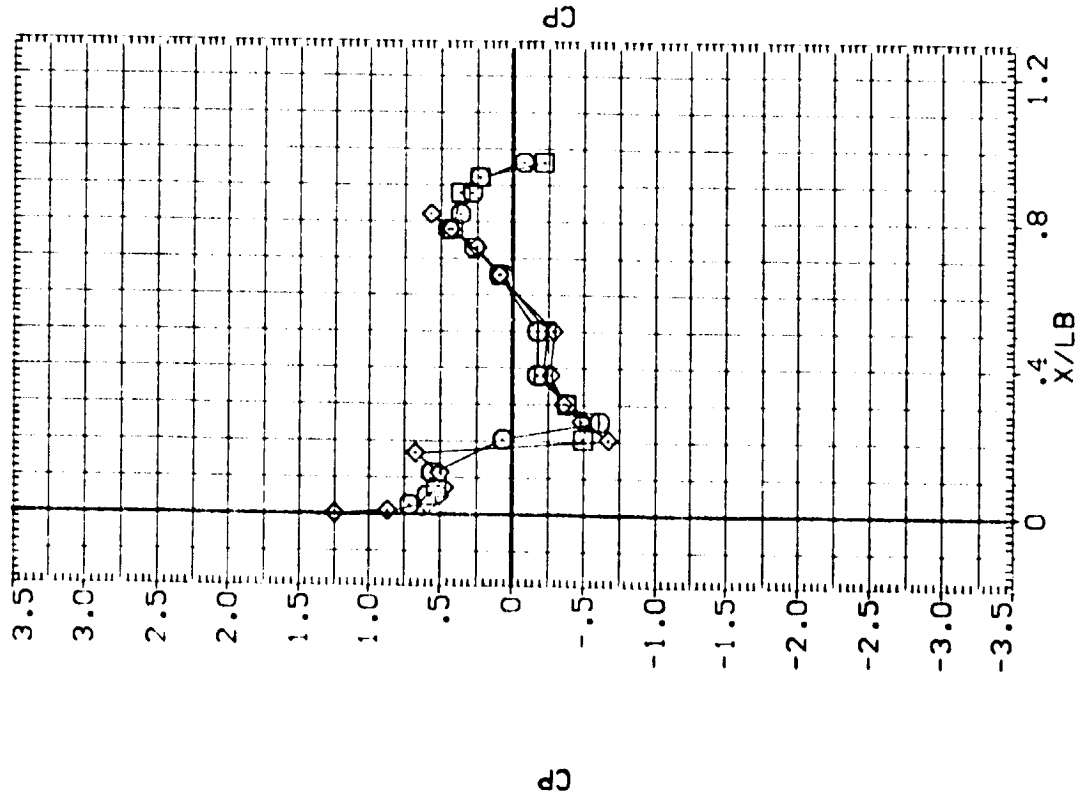
SYMBOL
 O
 □
 ◇

PHI 150.000
 165.000
 180.000

BETA0 -8.020
 .030

ALPHA0 -8.080

PARAMETRIC VALUES
 MACH 1.050
 RUDDER .000
 ELEVON .000
 SPOSRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1938)

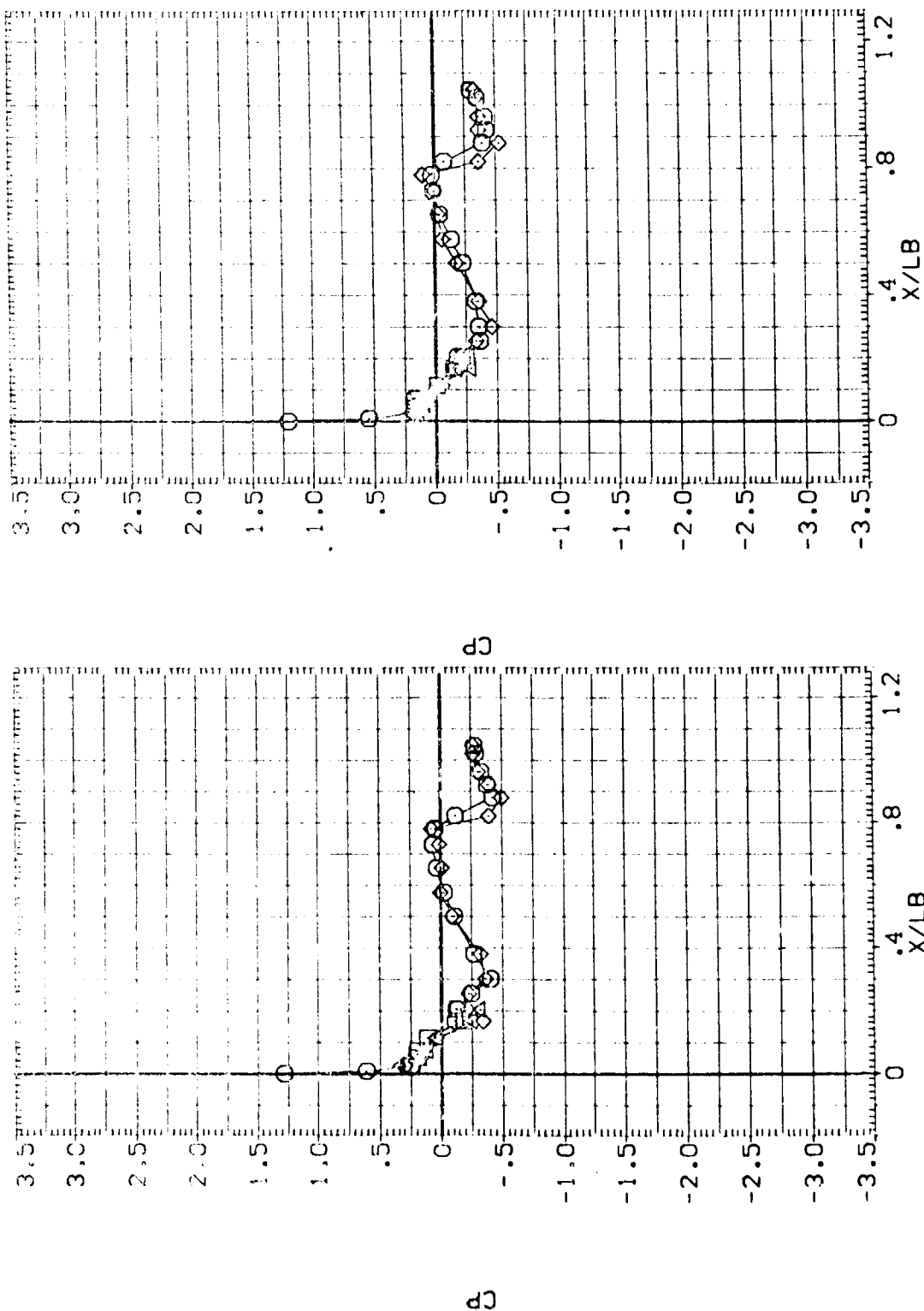
SYMBOL
○
◇
△

PHI
.000
20.000
40.000
55.000

BETA
4.120
8.160

ALPHA
-8.070

PARAMETRIC VALUES
MACH 1.030
ELEVON .000
RUDDER .000
SPDRBK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 (A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38))

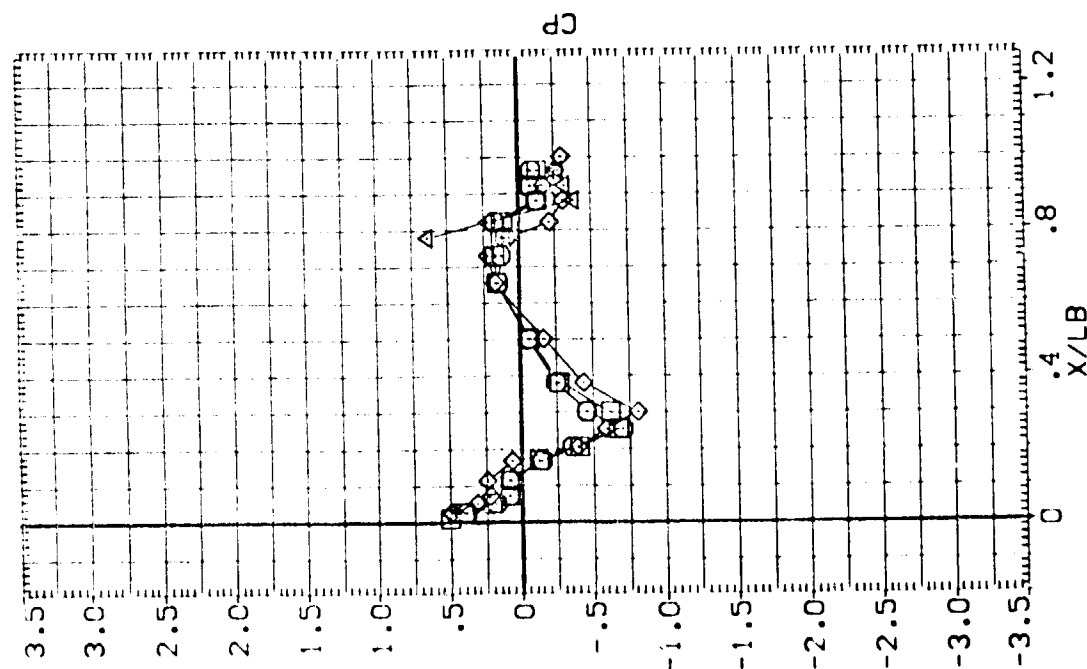
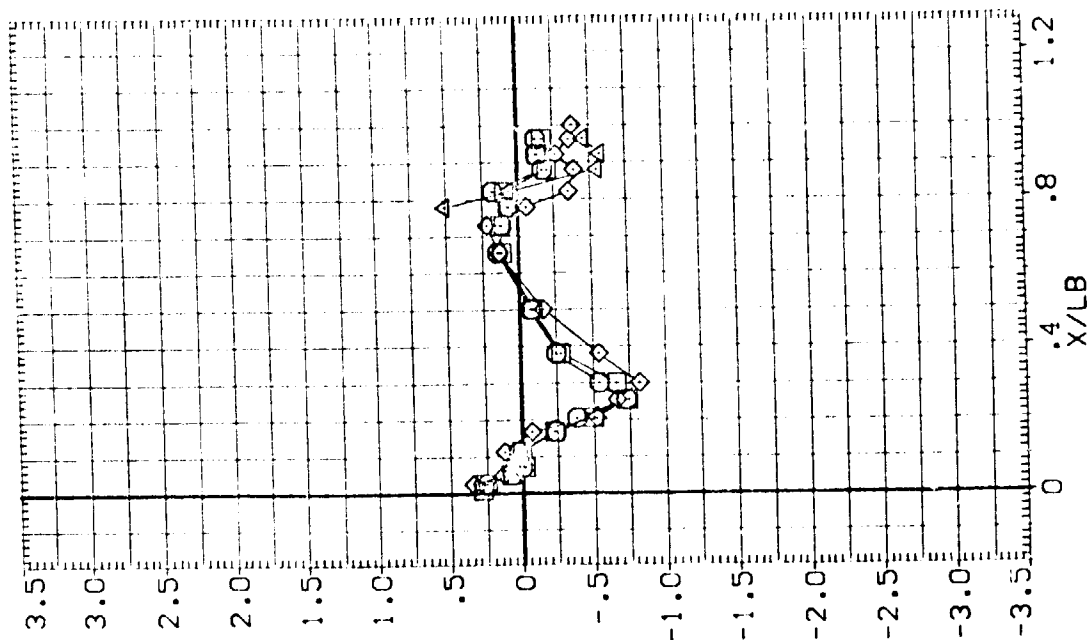
SYMBOL
□ □ □ □

PHI 70.000
90.000
120.000
135.000

BETA0 4.120
8.160

ALPHA0 -8.070

PARAMETRIC VALUES
MACH 1.050
RUDDER .000
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

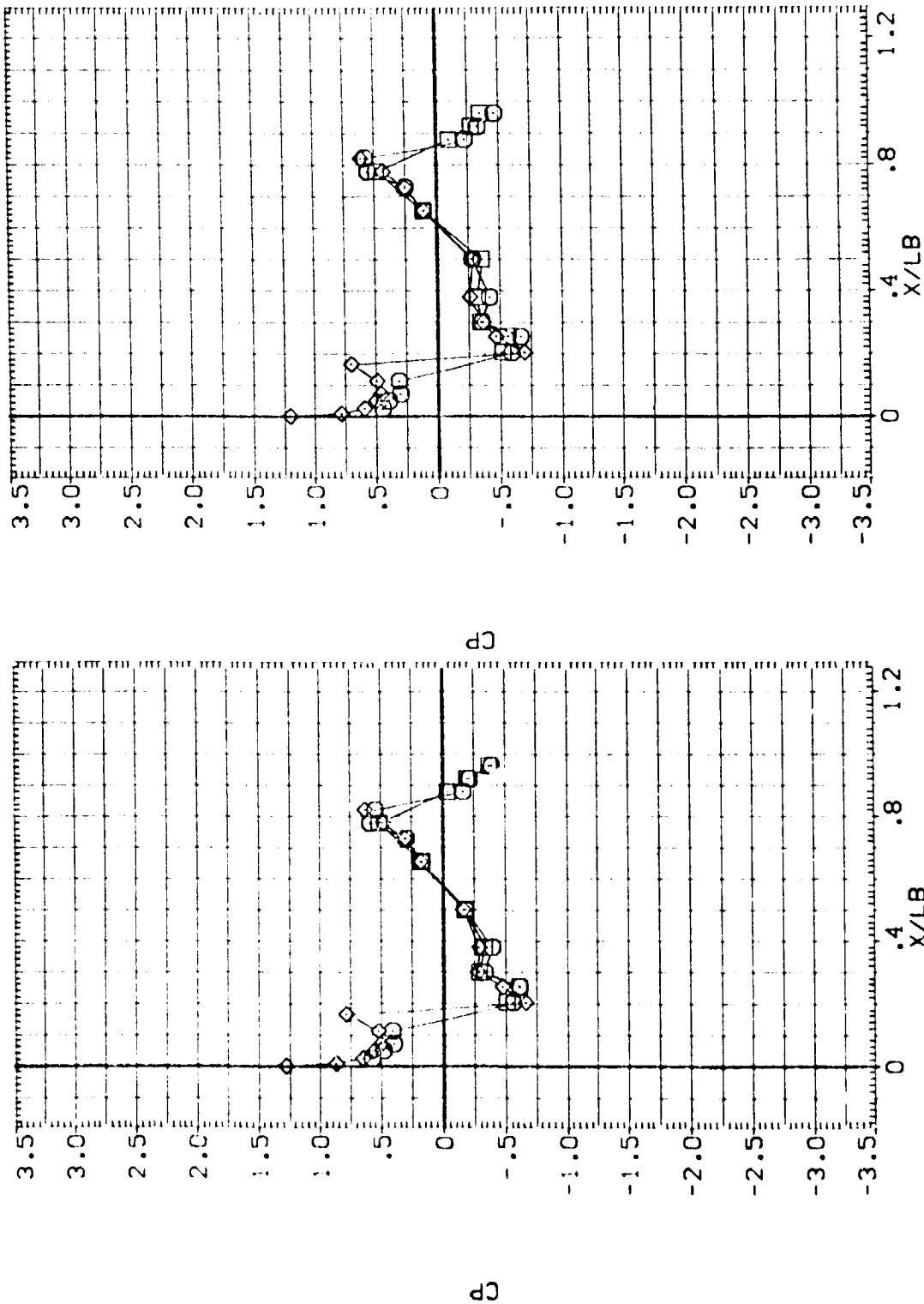
SYMBOL
 ○ □ ◇

PHI
 150.000
 165.000
 180.000

BETA0
 4.120
 8.160

ALPHA0
 -8.070

PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 RUDDER .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

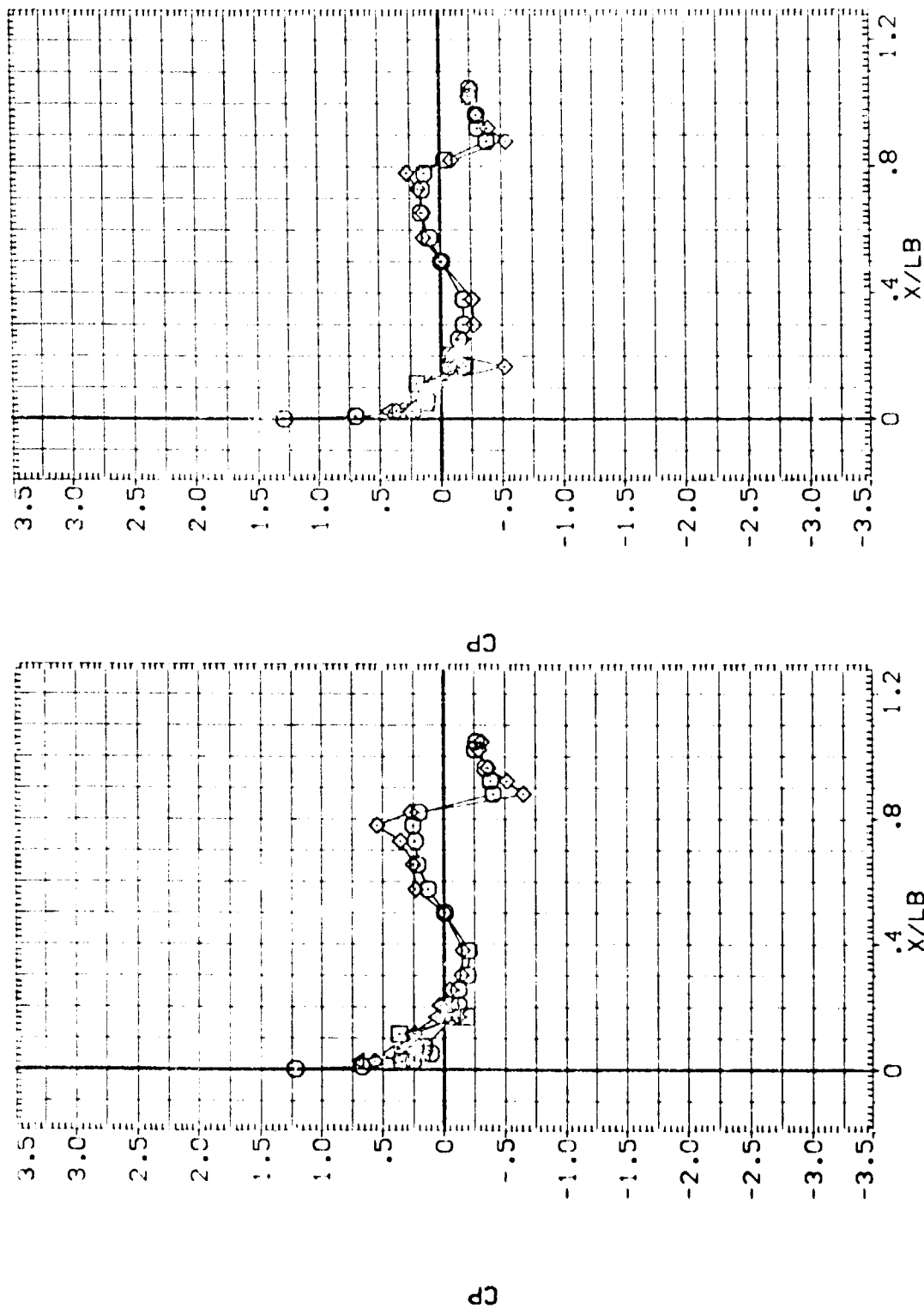
SYMBOL
 O
 ◇
 △

PHI .000
 20.000
 40.000
 55.000

BETA0 -8.040
 .040

ALPHA0 -3.10

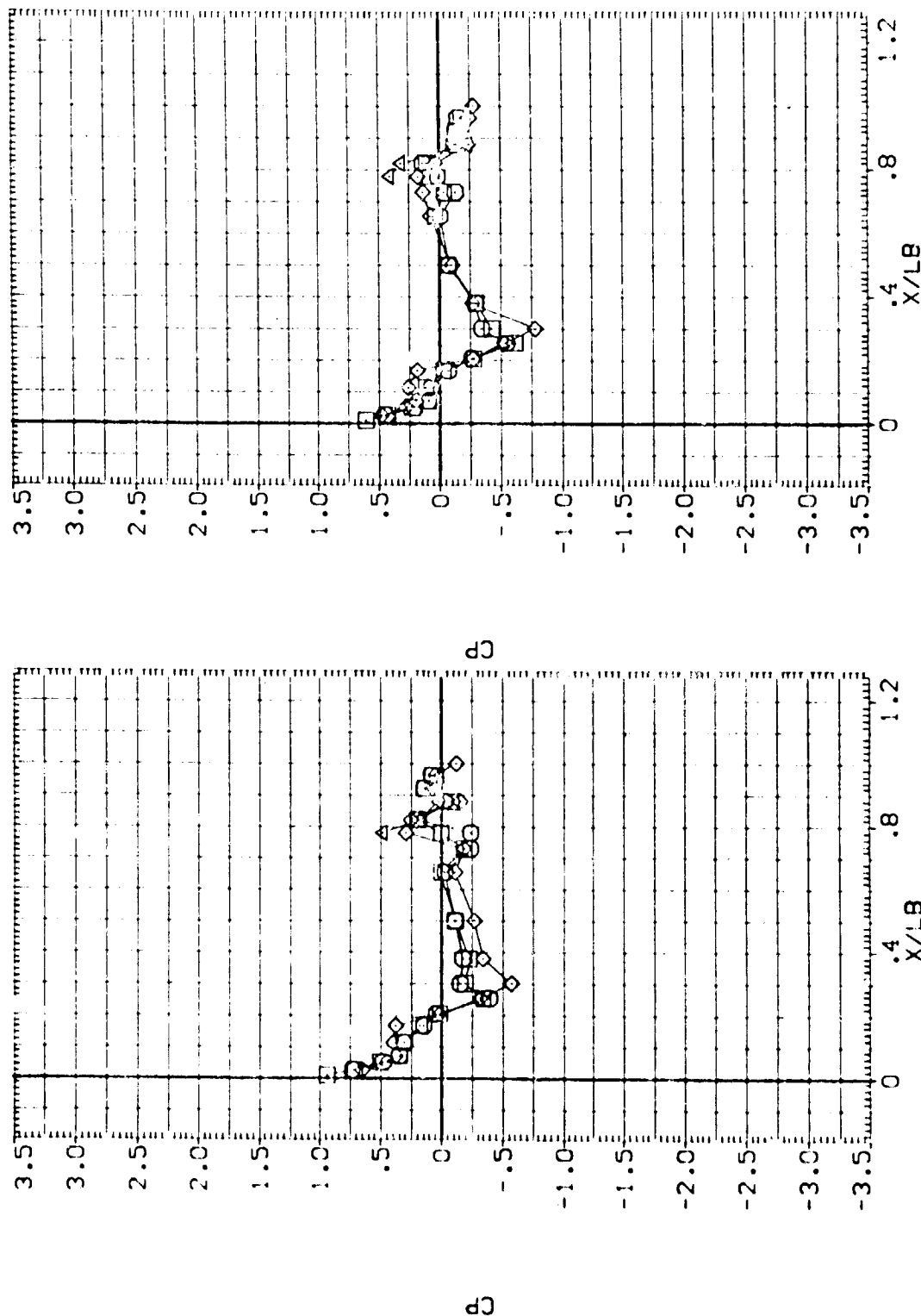
PARAMETRIC VALUES
 MACH 1.050
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

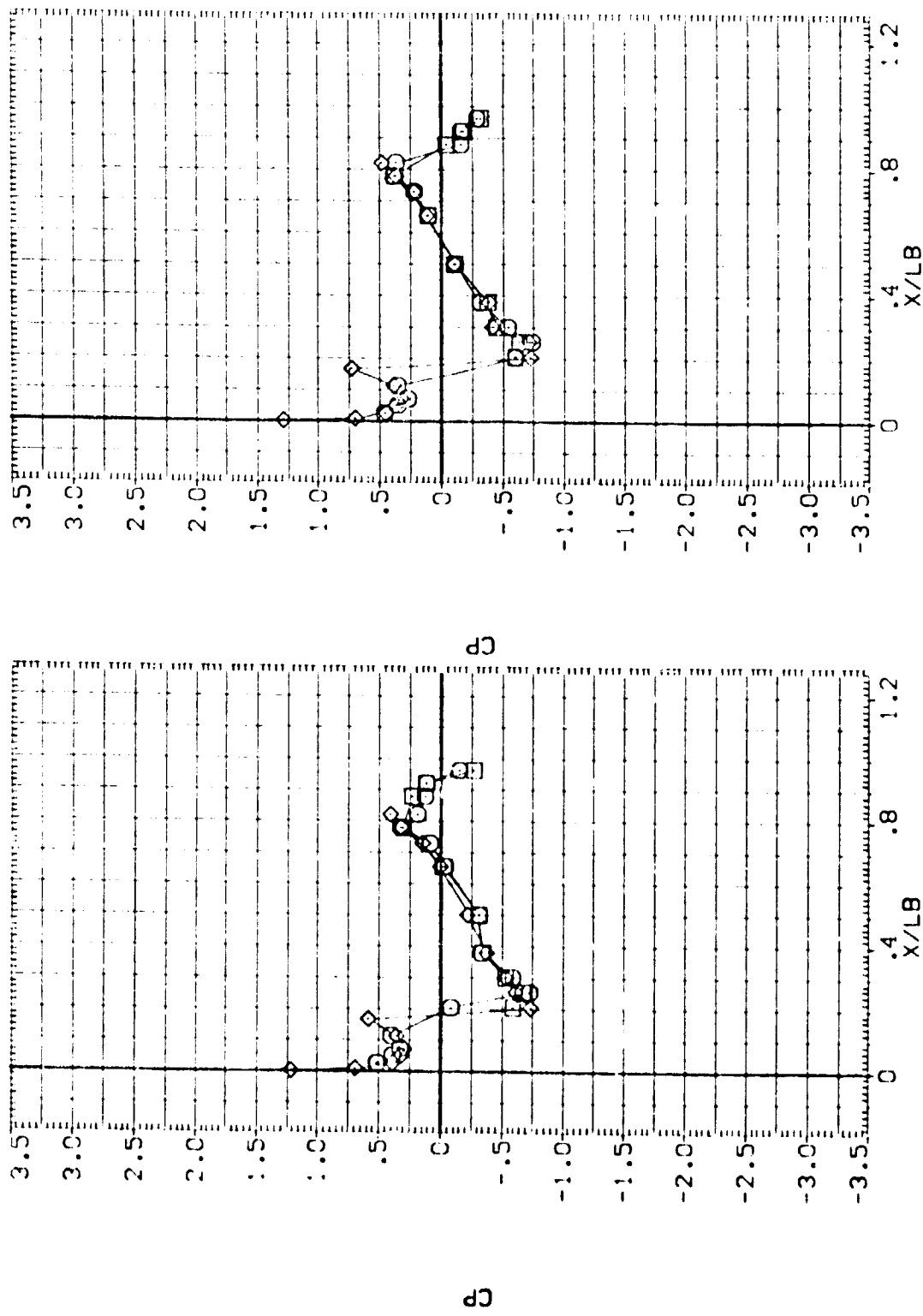
SYMBOL	PHI	BETA0	ALPHA0	PARAMETRIC VALUES
○	70.000	-8.040	-3.10	MACH 1.050 ELEVON .000
◇	90.000	.040		RUDER .000 SPDRK .000
△	120.000			
	135.000			



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S.2N25+AT11 ORB. FUSELAGE (RB1B38)

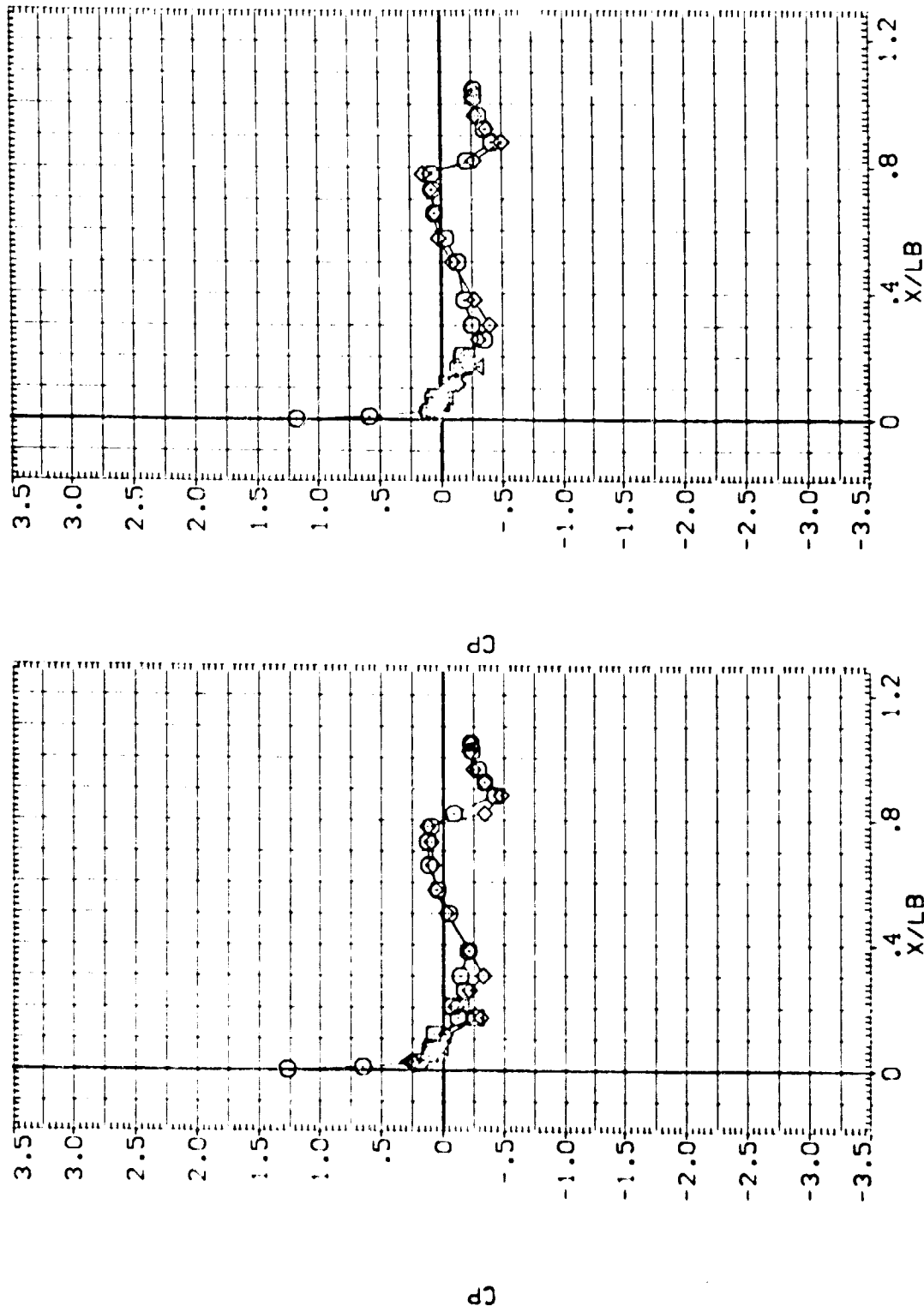
SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES	
	150.000	-8.040	-310	MACH	1.050
	165.000	.040		RUDDER	.000
	180.000				SPOILER
					.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 ORB. FUSELAGE (R81B38)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	SPDRK
○	.000	4.050	-.320	.000	.000	.000
◇	20.000	8.130				
△	40.000					
	55.000					



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 ORB. FUSELAGE (RB1B38)

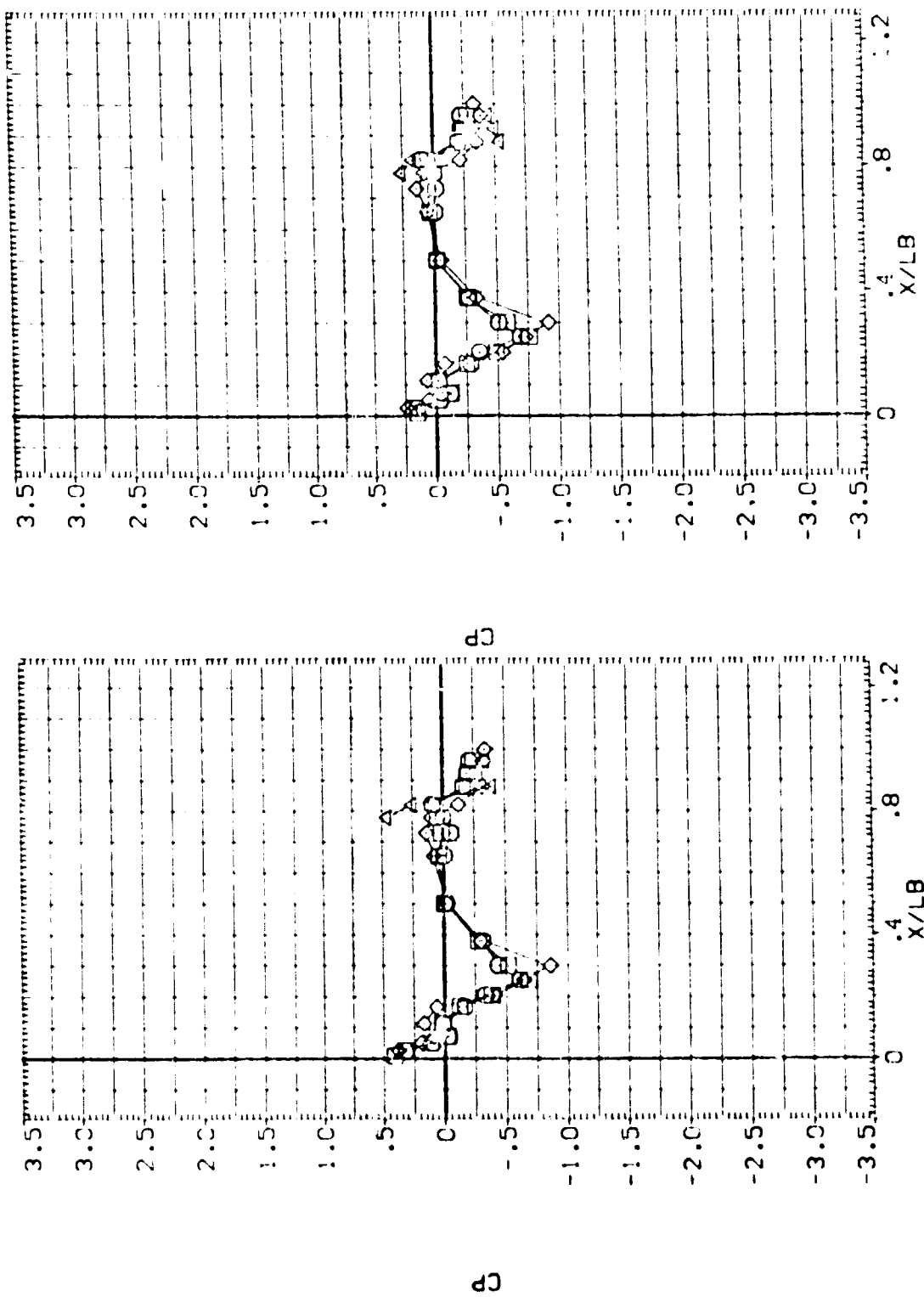
SYMBOL
○
◇
△

PHI
70.000
90.000
120.000
150.000

BETA
4.090
8.180

ALPHA
-1.320

PARAMETRIC VALUES
MACH 1.050 ELEVON .000
RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

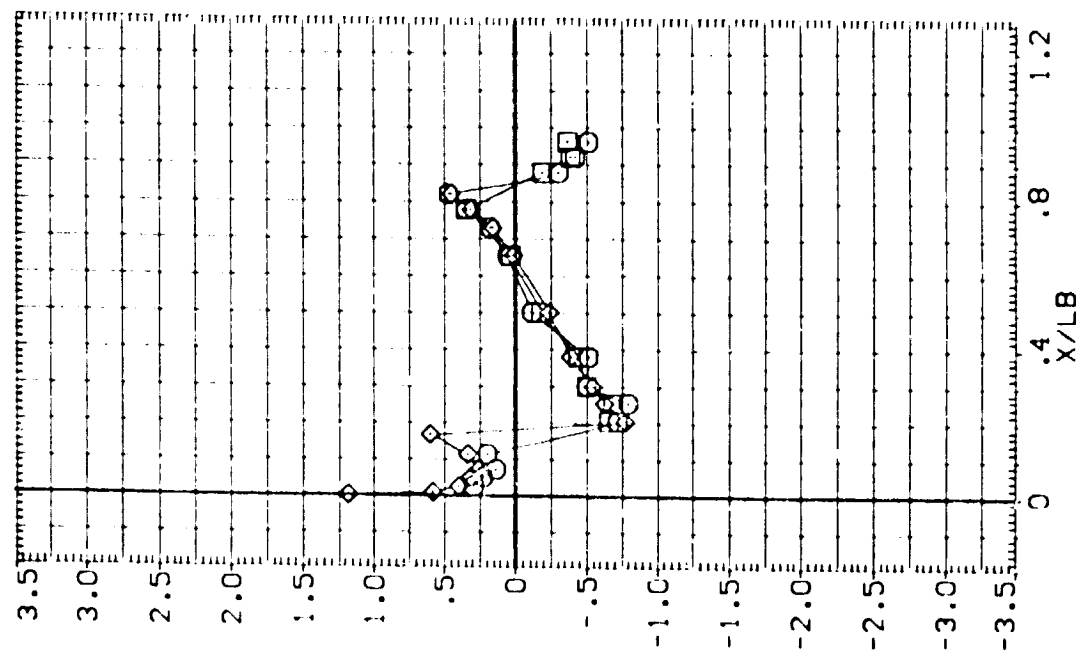
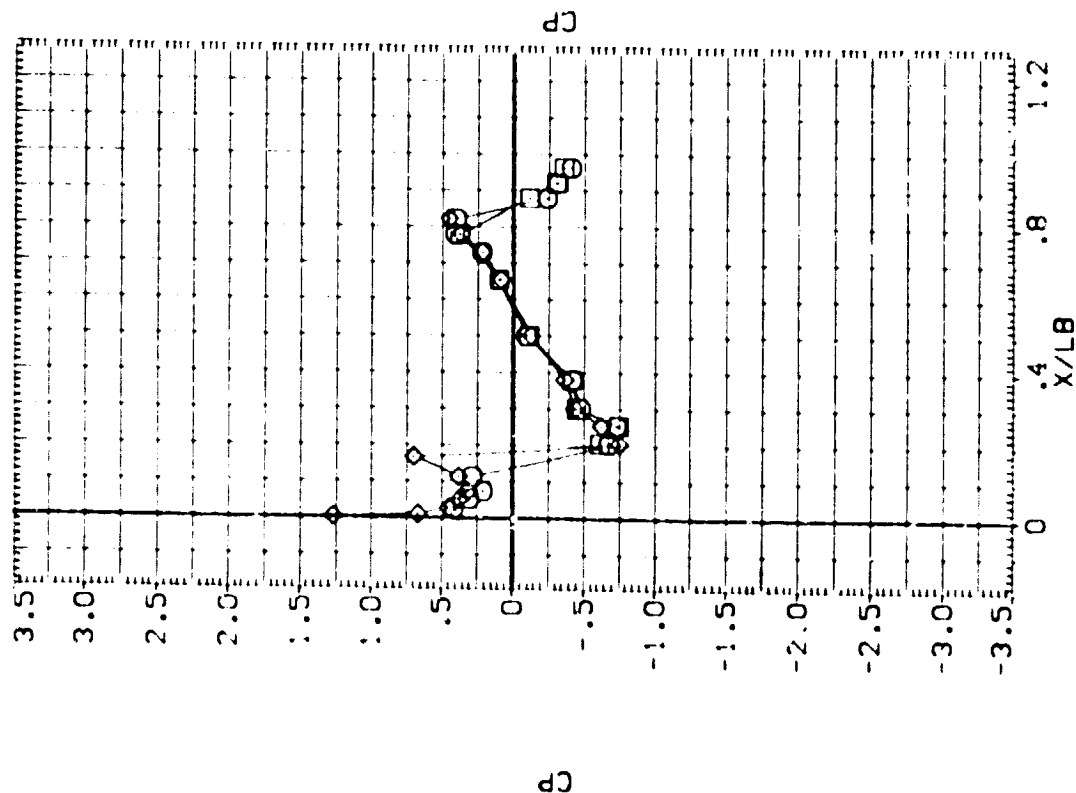
SYMBOL
○
◇

PHI
150.000
165.000
180.000

BETA0
4.090
8.130

ALPHA0
-.320

PARAMETRIC VALUES
MACH
1.050
ELEVON
.000
RUDDER
.000
SPOILER
.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 C1+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

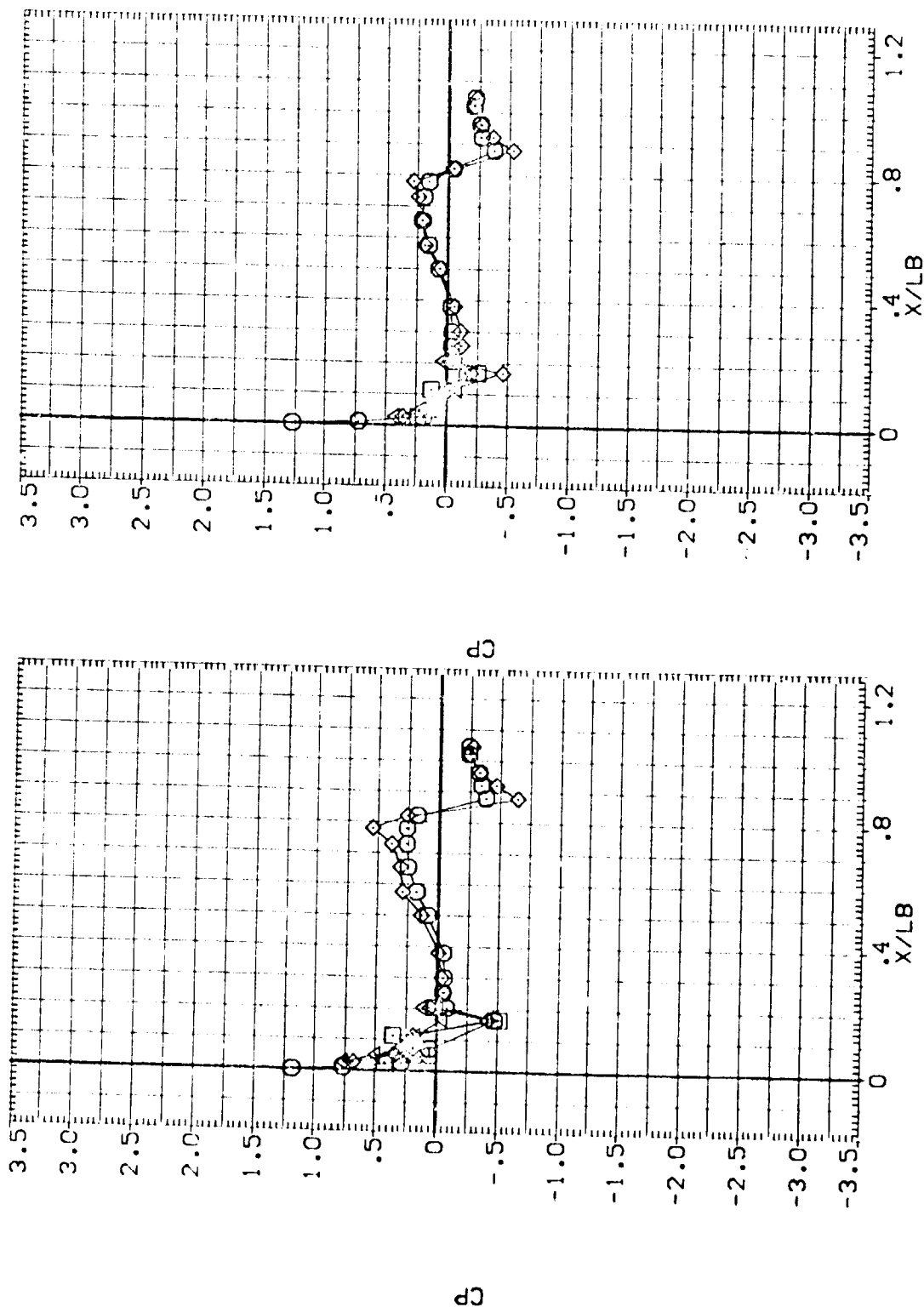
SYMBOL
 ○ □ ◇ △

PHI .000
 20.000
 40.000
 55.000

BETA0 -8.010
 .040

ALPHA0 7.930

PARAMETRIC VALUES
 MACH 1.050
 RUDDER .000
 ELEVON .000
 SPDRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

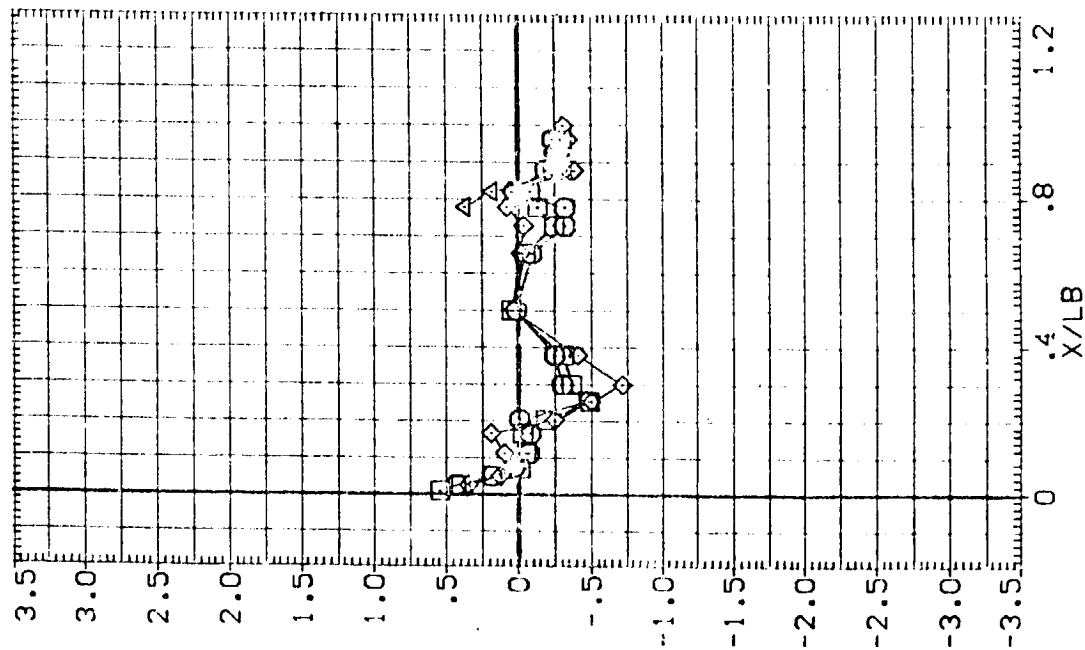
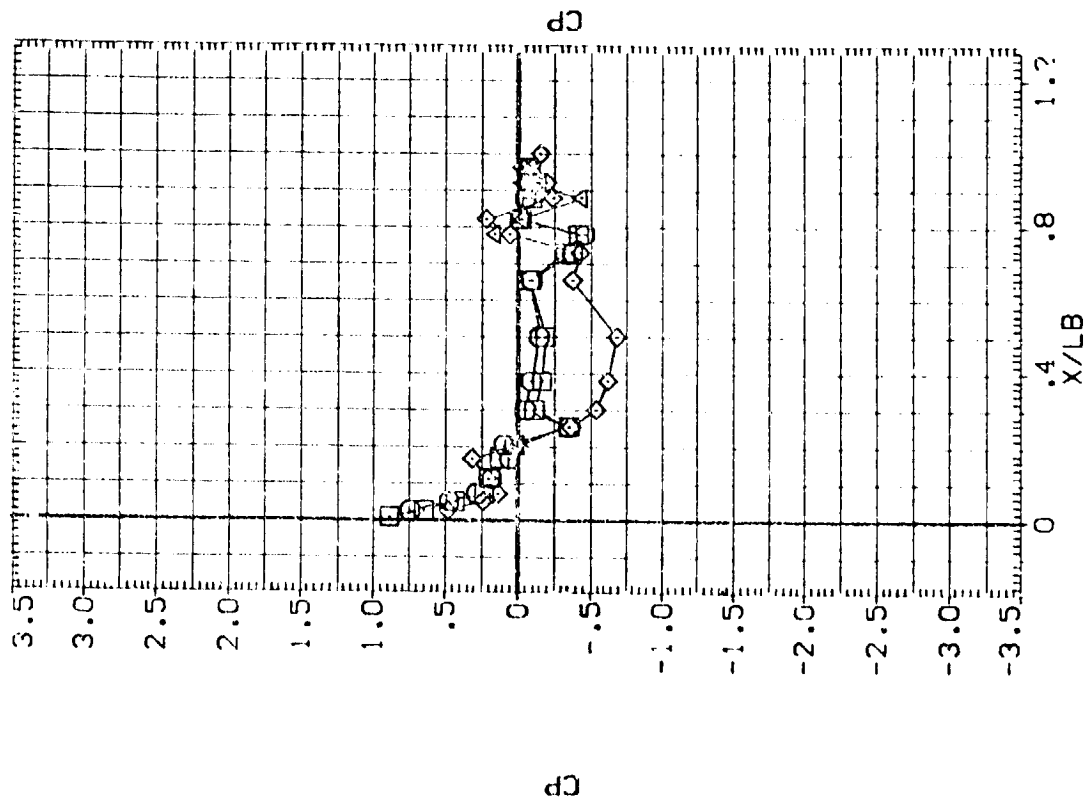
SYMBOL

PHI 70.000
90.000
120.000
135.000

BETA0 -8.016
.040

ALPHA0 7.930

PARAMETRIC VALUES
MACH 1.050
ELEVON .000
RUDDER .000
SPDRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

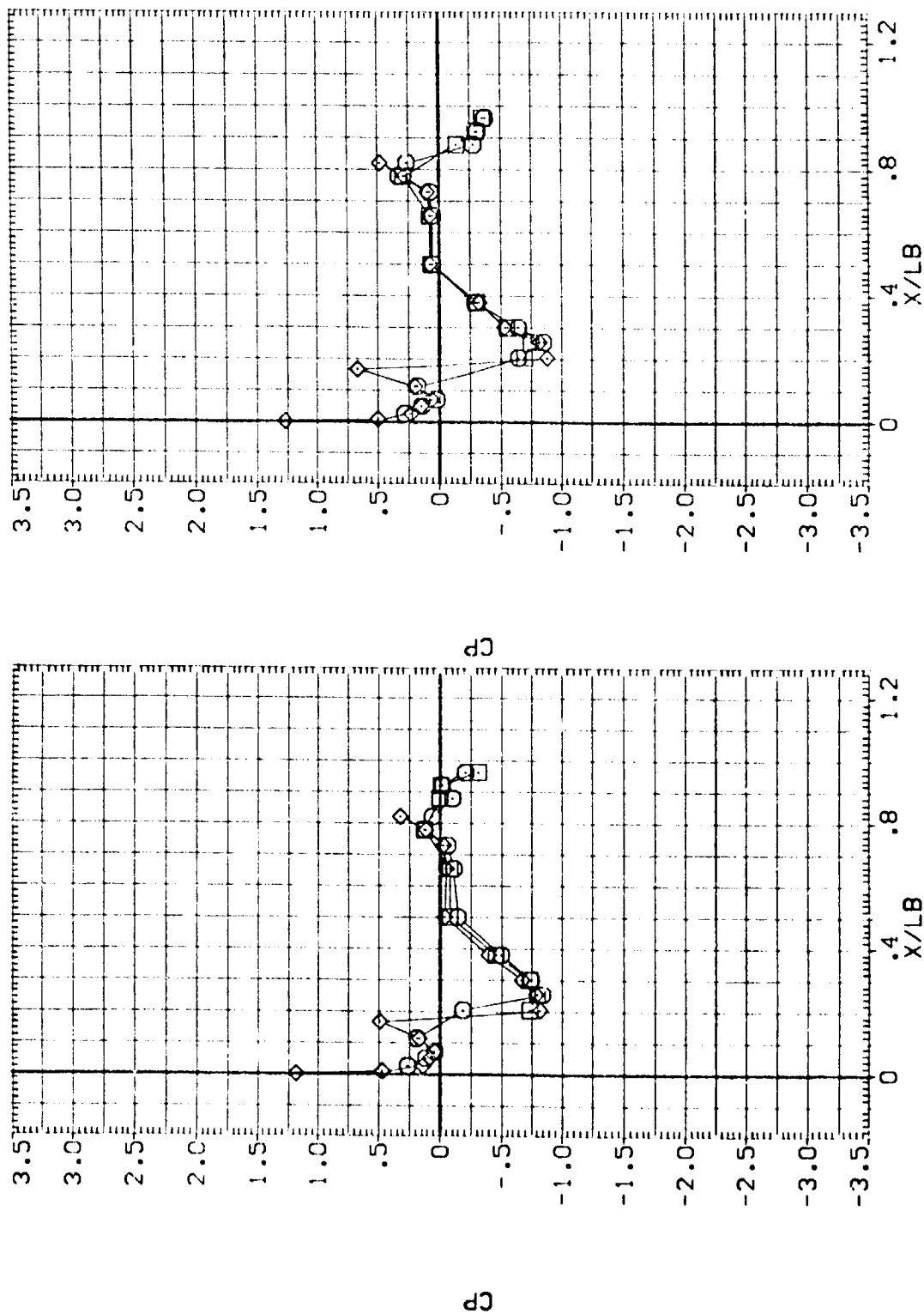
SYMBOL
 ○
 □
 ◇

PHI
 150.000
 165.000
 180.000

BETA0
 -8.010
 .040

ALPHA0
 7.930

PARAMETRIC VALUES
 MACH 1.050
 RUDDER .000
 ELEVON .000
 SPOILER .000

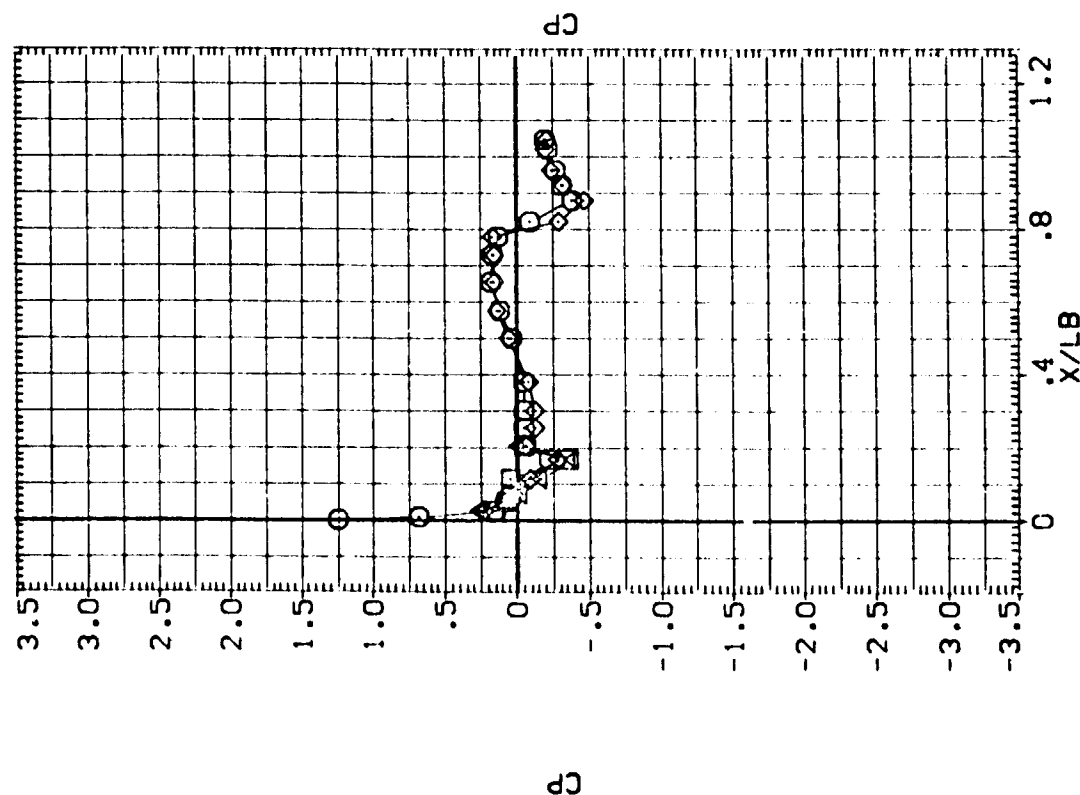
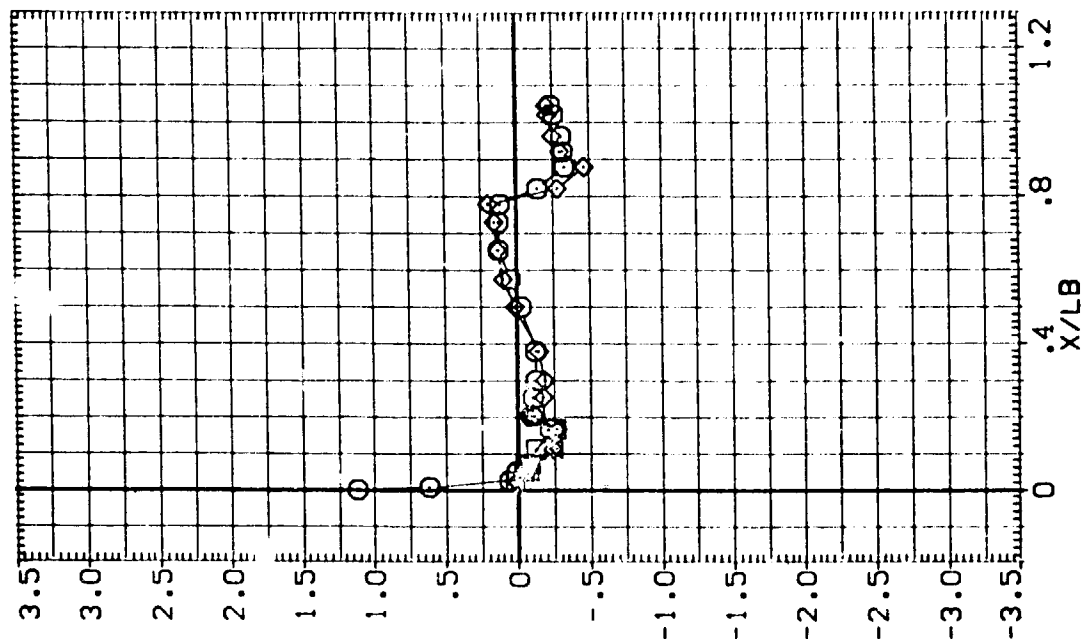


LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL PHI BETA₀ ALPHA₀
 ○ .000 4.110 7.930
 □ 20.000 8.200
 ◇ 40.000
 △ 55.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (R91B38)

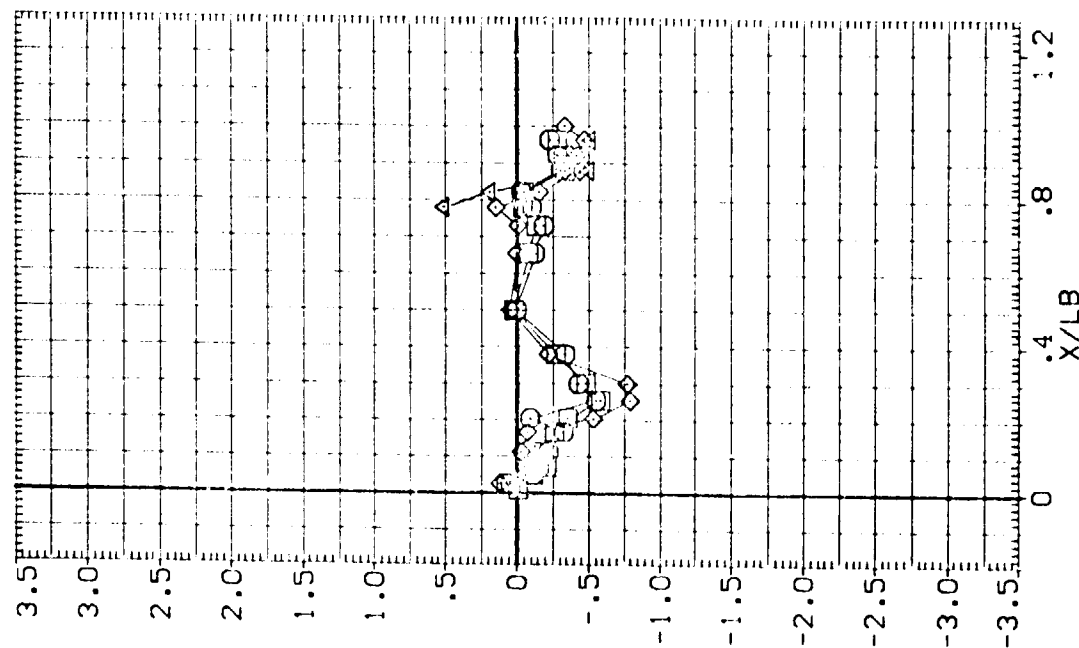
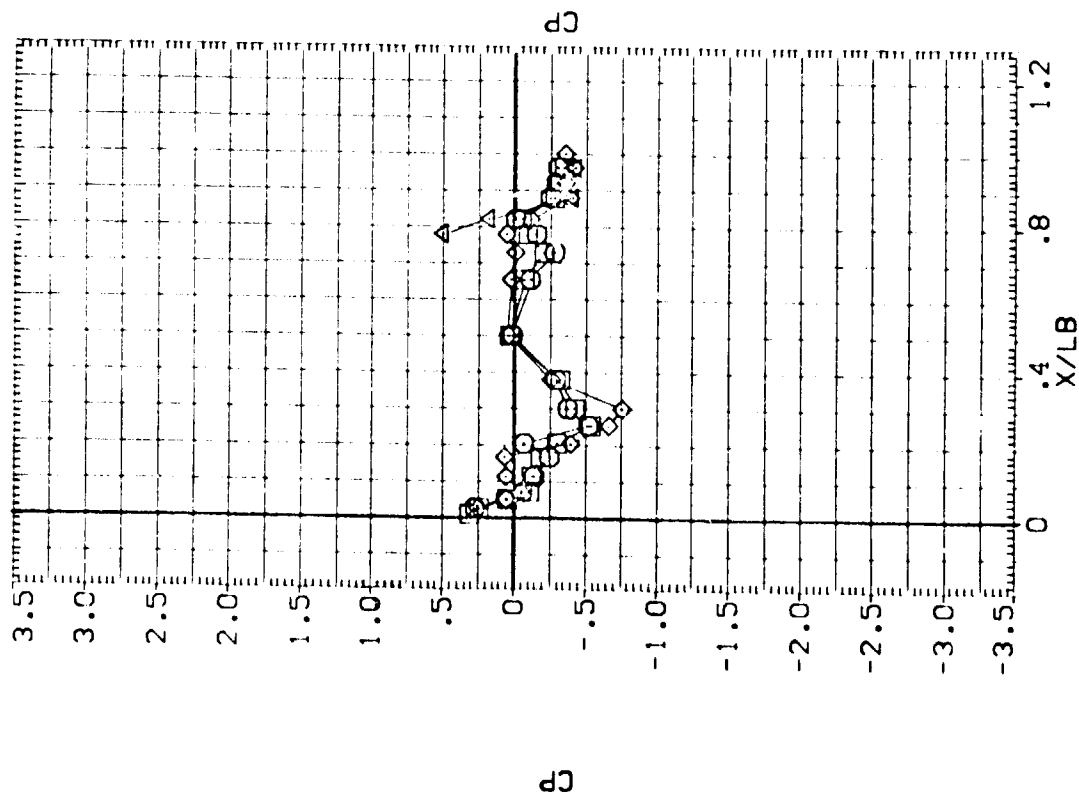
SYMBOL

70.000
90.000
120.000
135.000

BETA0 4.110
8.200

ALPHA0 7.930

MACH .000
RUDDER .000
ELEVON .000
SPDBRK .000



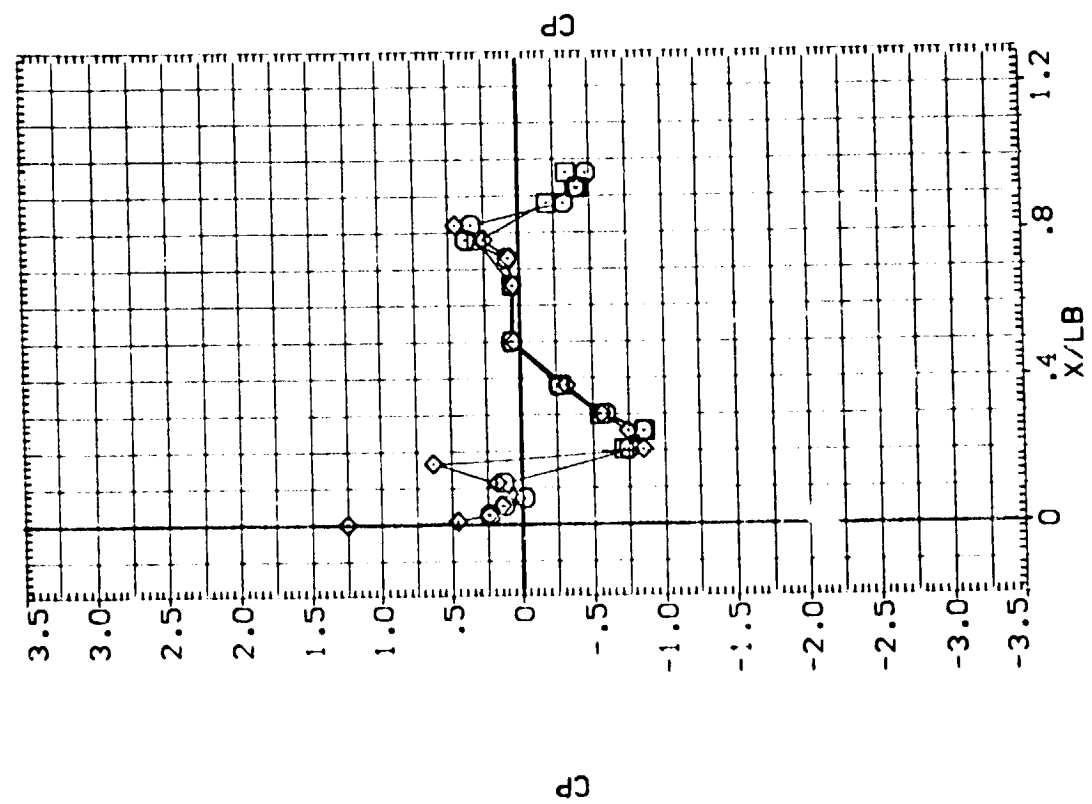
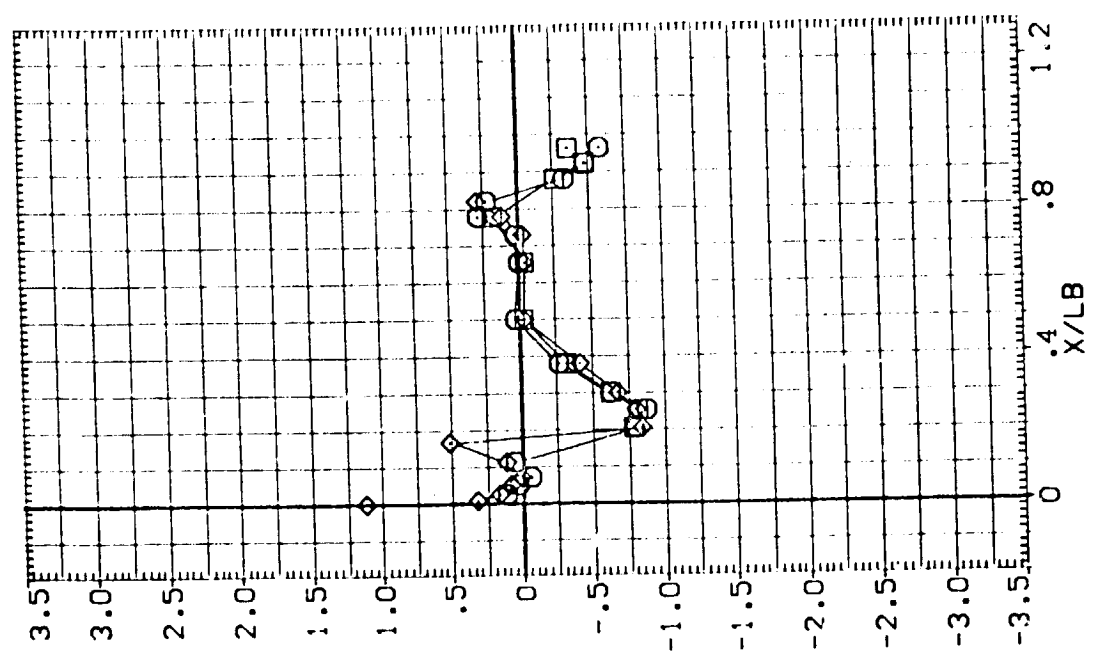
LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B38)

PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 RUDDER .000 SPOBRK .000

PHI 150.000 BETA0 4.110 ALPHA0 7.930
 165.000 8.200
 180.000

SYMBOL
 ○ □ ◇



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC1:-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

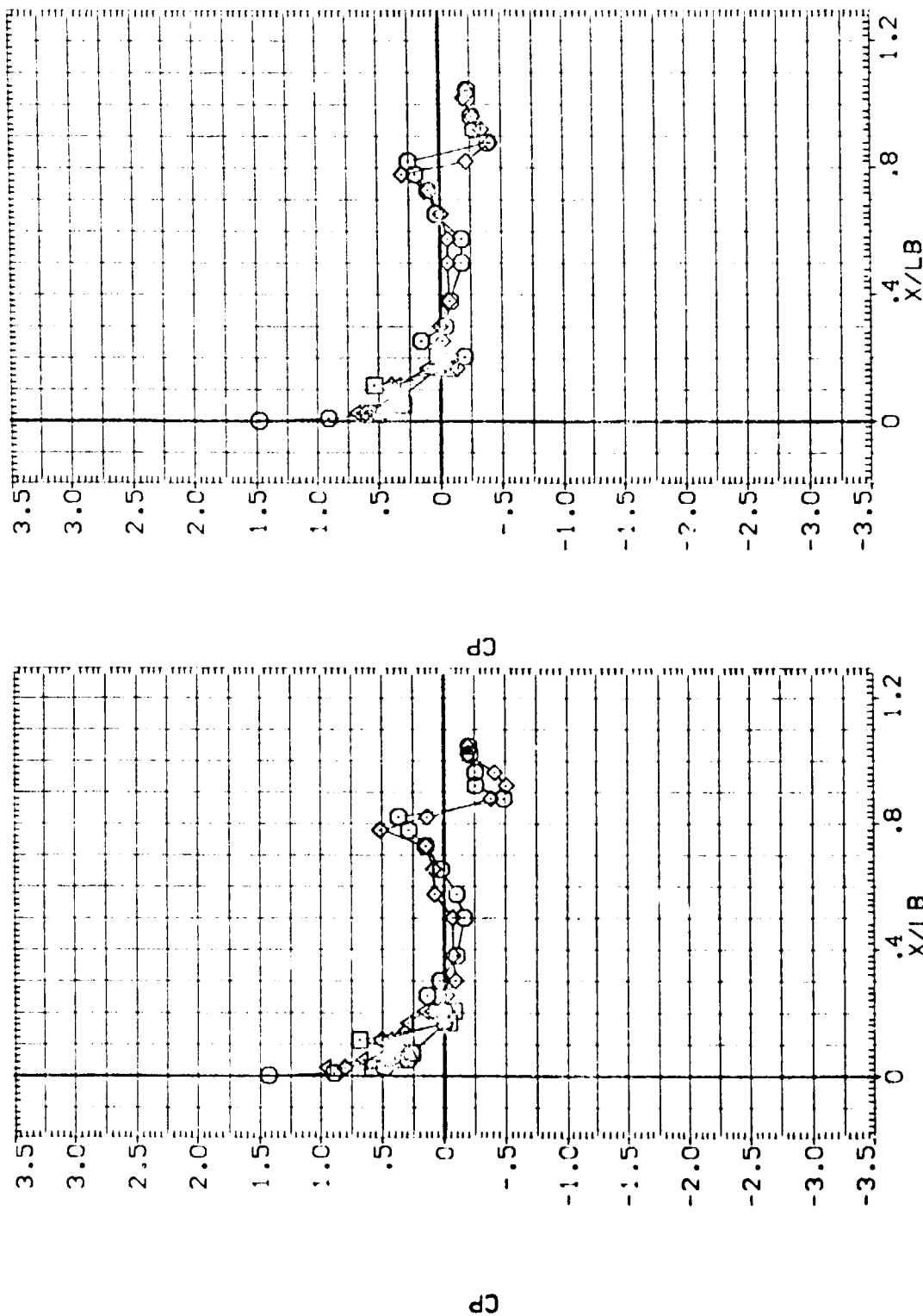
SYMBOL
O □ ◇ △

PMI .000
20.000
40.000
55.000

BETA0 -8.040
.030

ALPHA0 -7.920

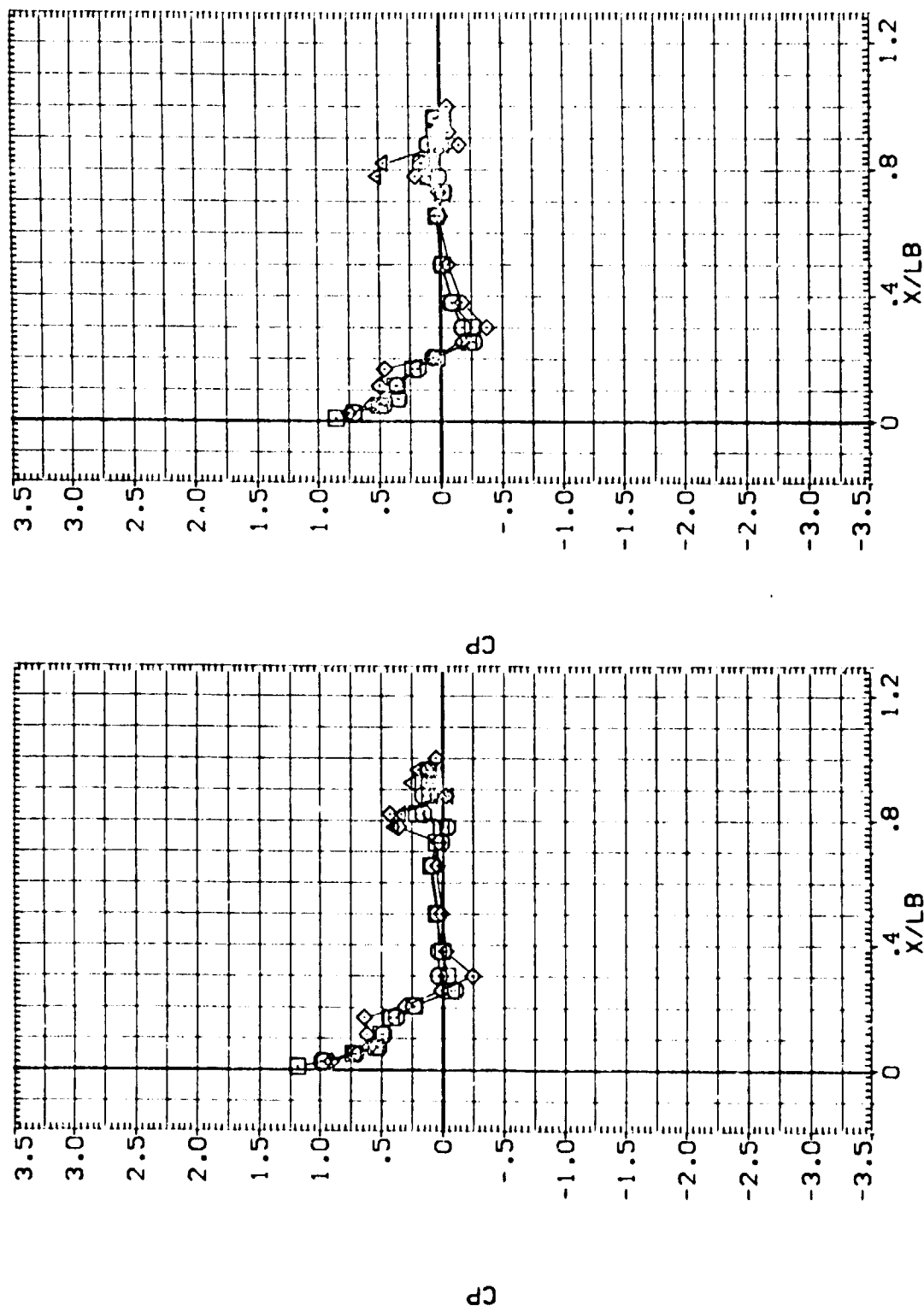
PARAMETRIC VALUES
MACH 1.400
ELEVON .000
RUDDER .000
SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

SYMBOL	PHI	BETA	ALPHA	MACH	PARAMETRIC VALUES
○	70.000	-8.040	-7.920	RUDDER	1.400
◇	90.000	.030			.000
△	120.000				SPDRK
	135.000				.000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

SYMBOL

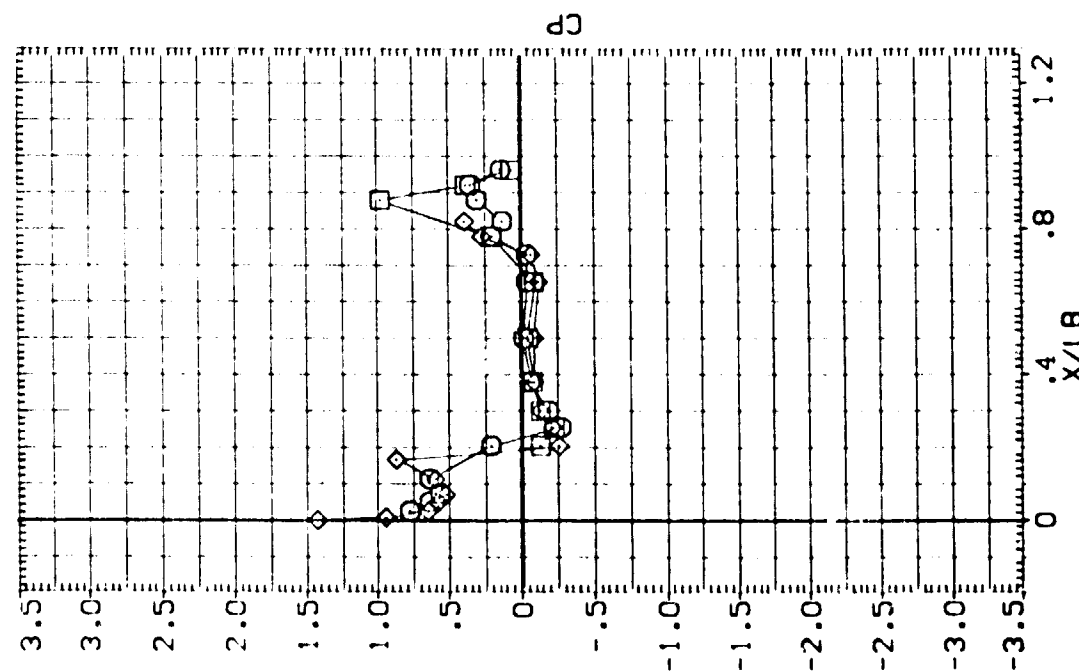
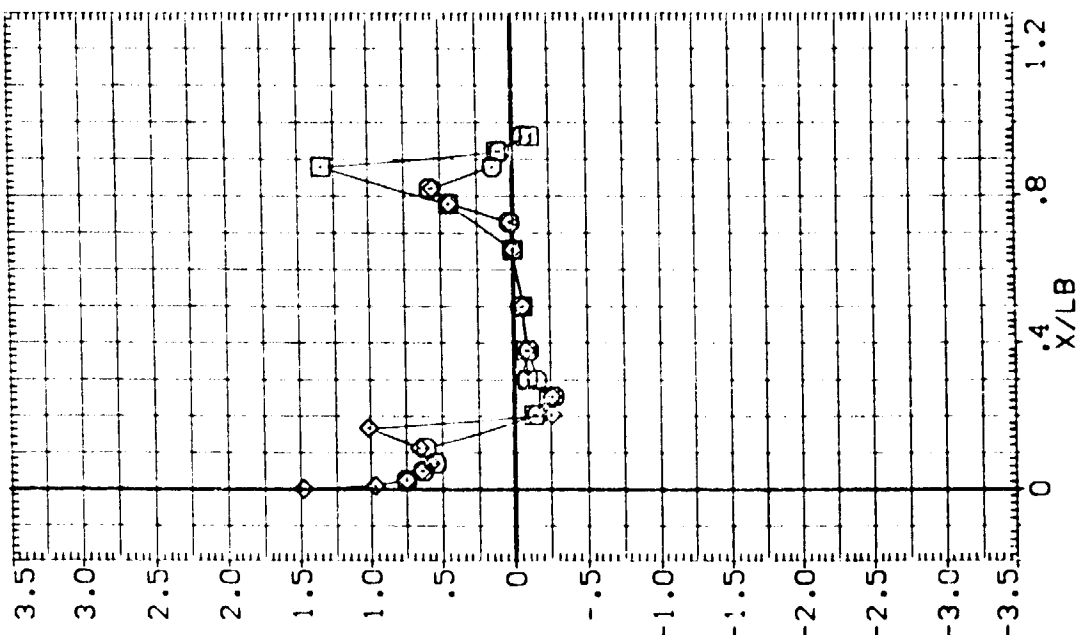
○ ○ ◇

PHI 150.000
165.000
180.000

BETA0 -8.040
.030

ALPHA0 -7.920

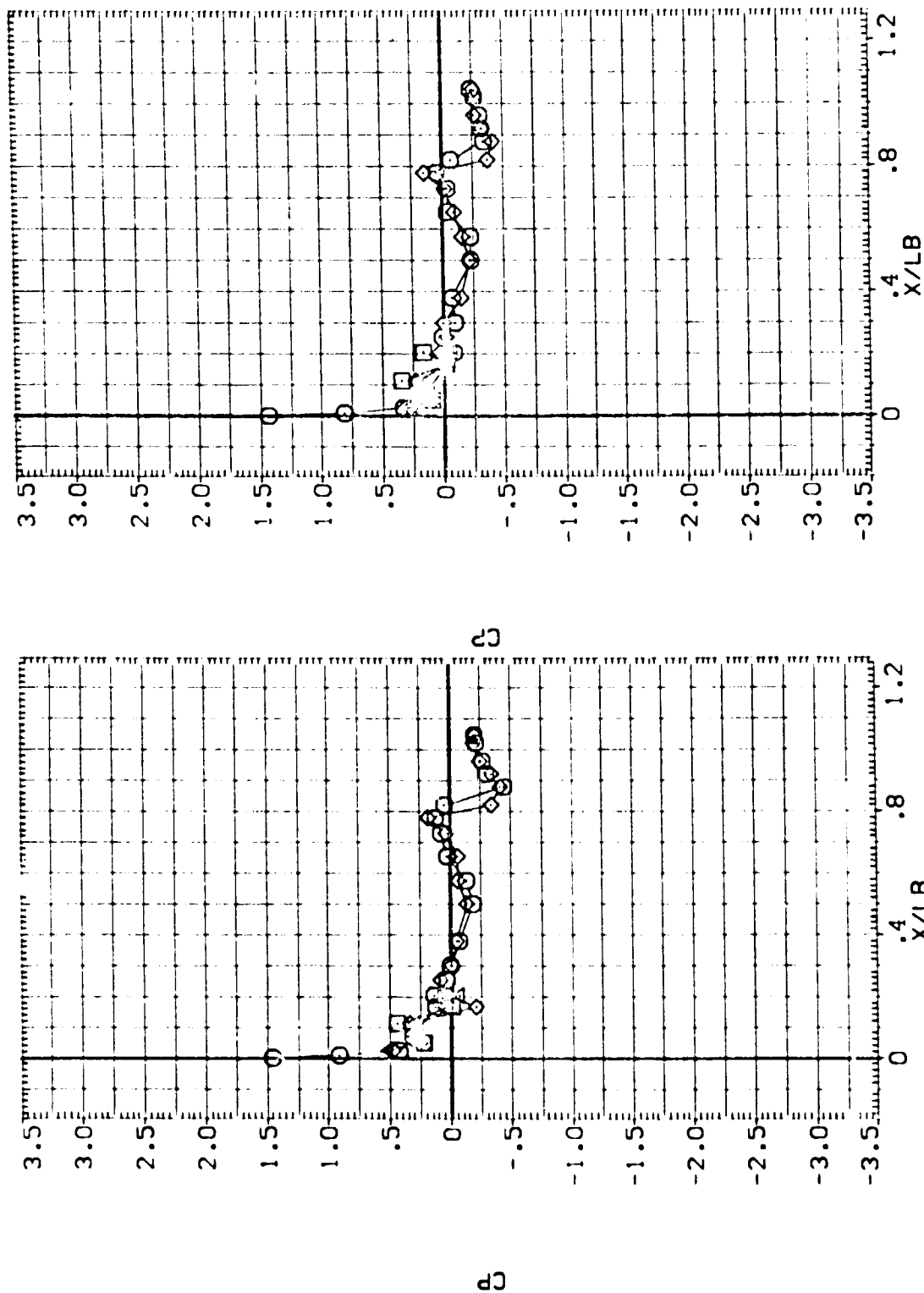
PARAMETRIC VALUES
MACH 1.400
ELEVON .000
RUDDER .000
SPDRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC:1-716 1A14 01+112+S12N25+AT11 ORB. FUSELAGE (RB1840)

SYMBOL	PHI	BETAS	ALPHAS	PARAMETRIC VALUES		
				MACH	ELEVON	SPOBRK
○	.000	4.100	-7.910	.000	.000	.000
□	20.000	8.190		.000	.000	.000
◇	40.000					
△	55.000					

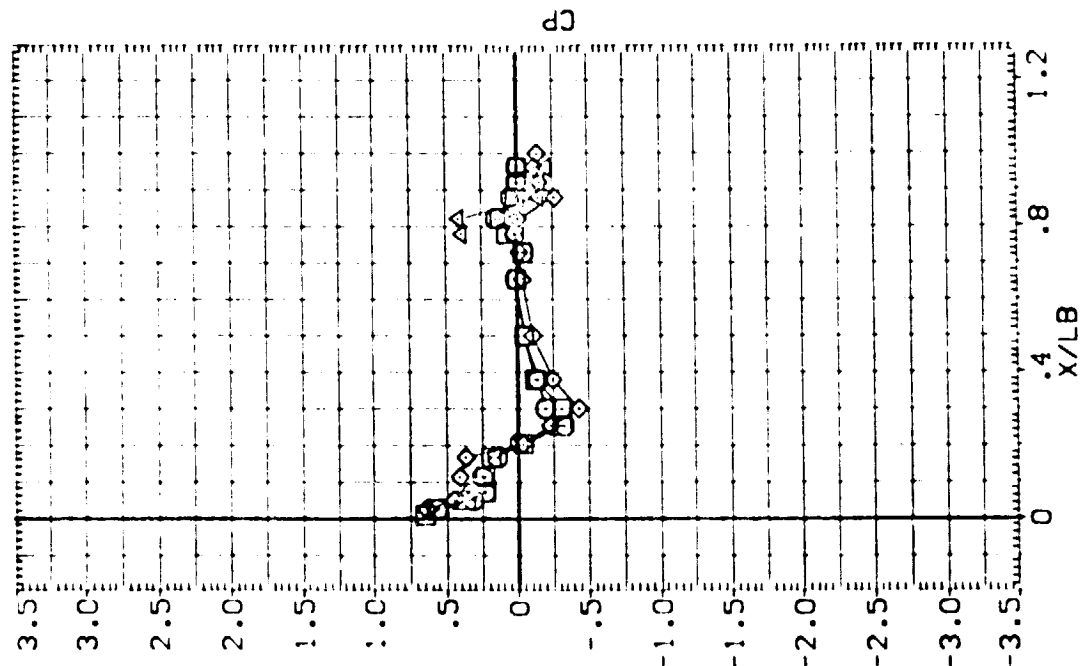
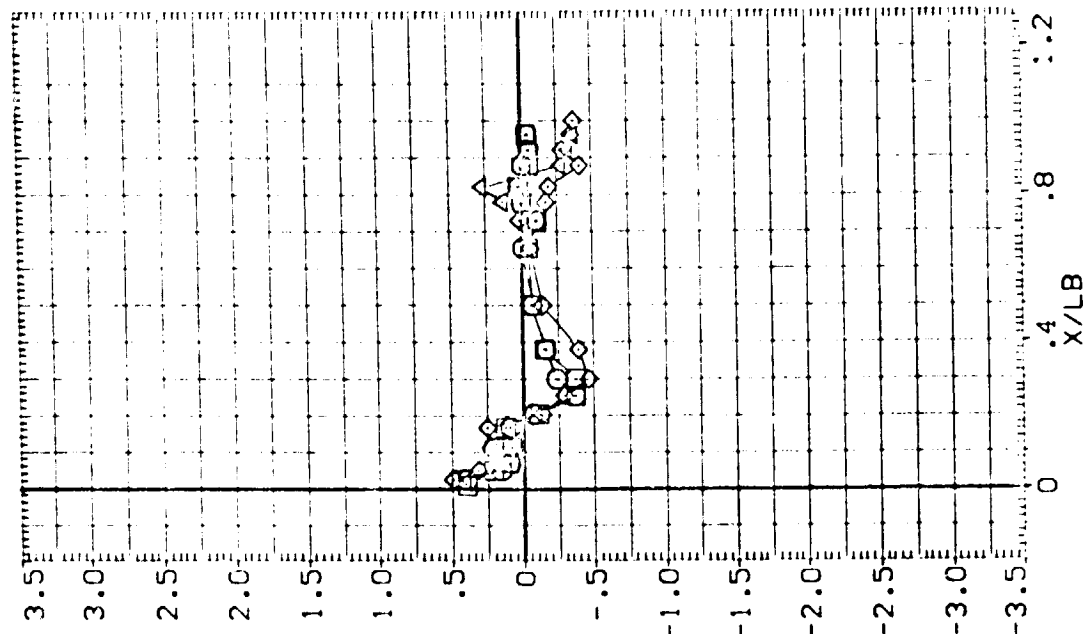


LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

PARAMETRIC VALUES
 MAG 1.400 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL PHI BETAP ALPHAD
 0 70.000 4.100 -7.910
 1 90.000 8.190
 2 120.000
 3 135.000



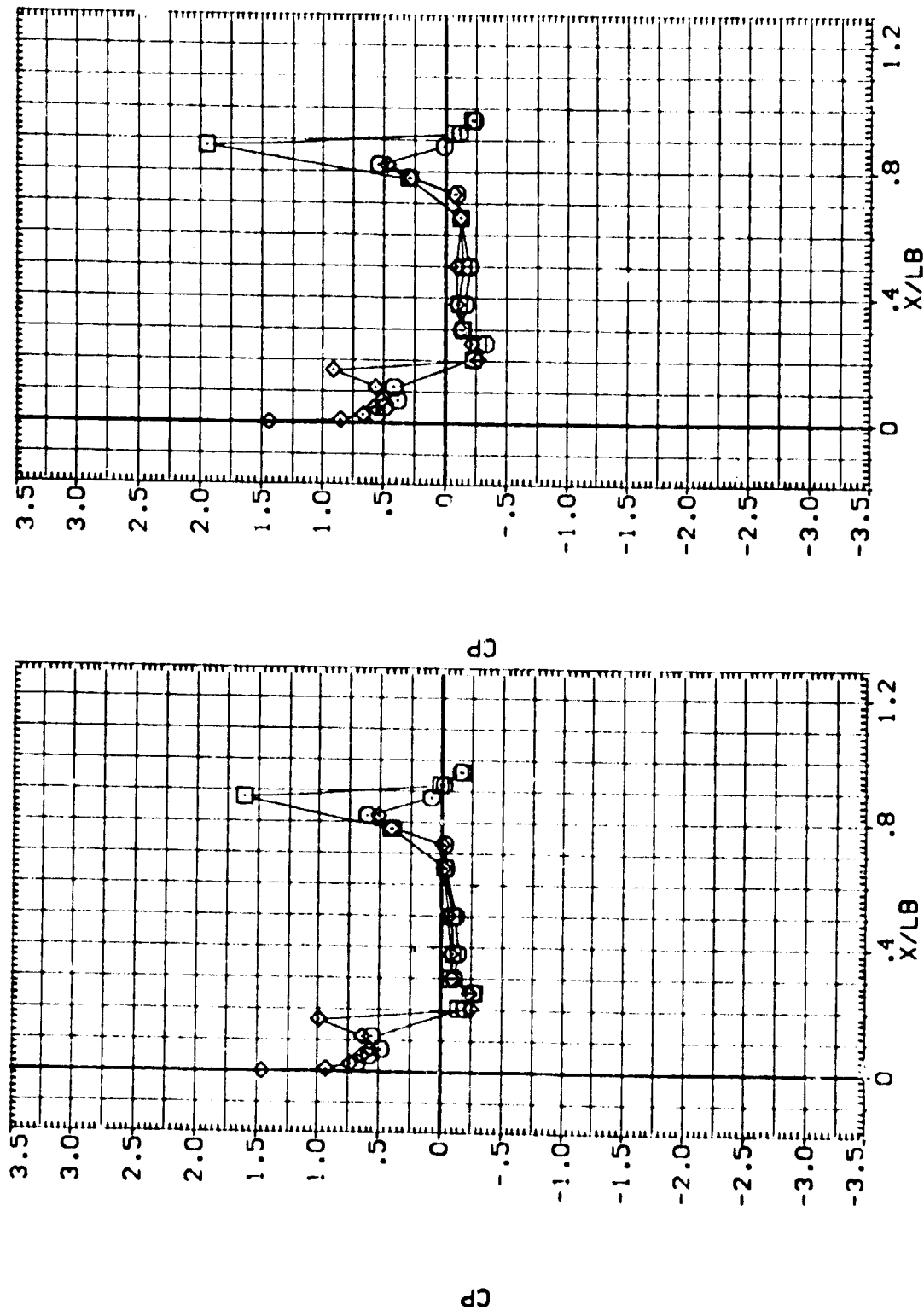
LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

SYMBOL
 ○ □ ◇

PHI 150.000
 165.000
 180.000
 BETAO 4.100
 ALPHA0 -7.910
 9.190

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

SYMBOL

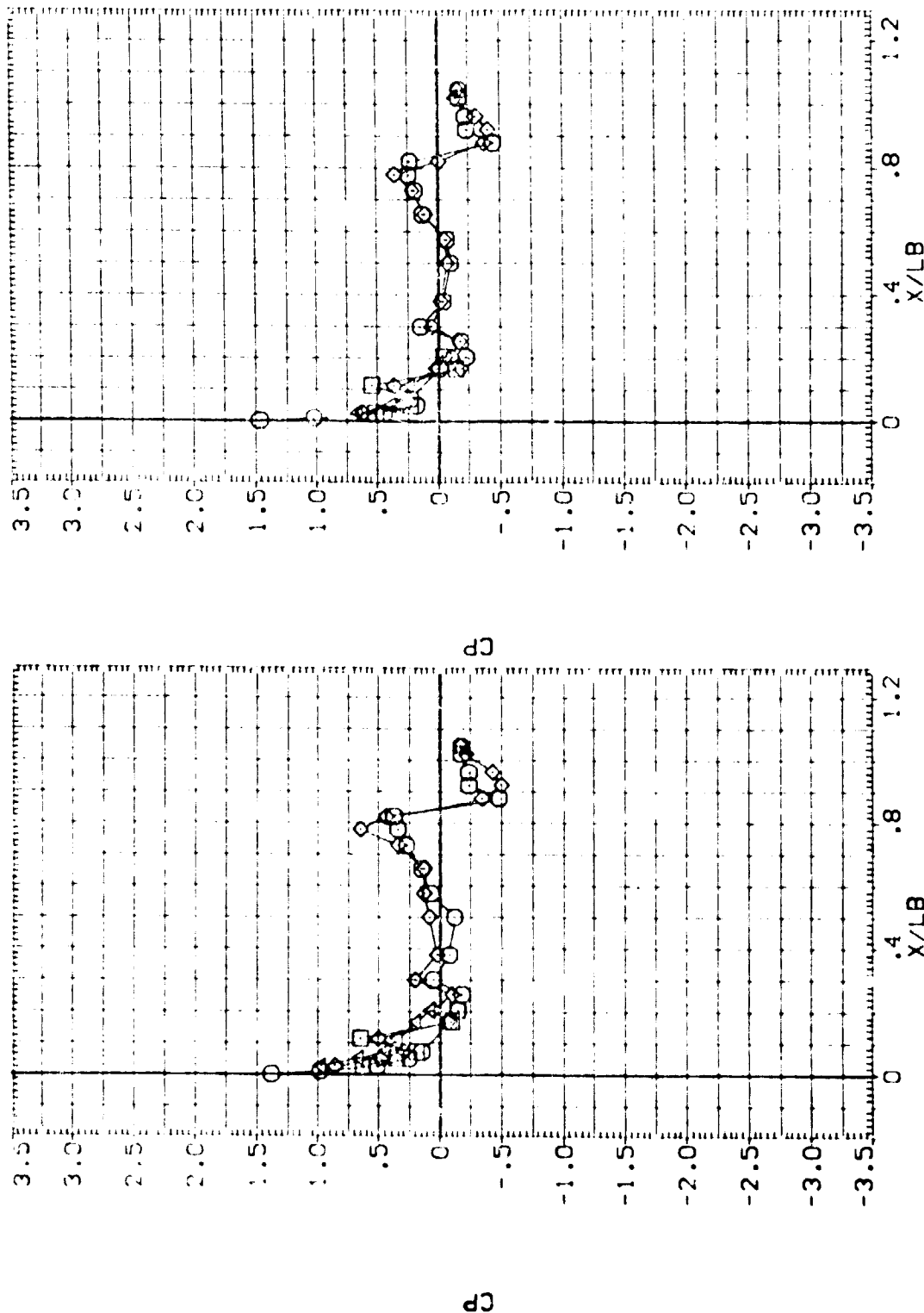
PHI
0.000
20.000
40.000
55.000

BETAS
-8.09C
.020

ALPHAS
-3.70

PARAMETRIC VALUES

MACH 1.400 ELEVON .000
RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 ORB. FUSELAGE (R81B40)

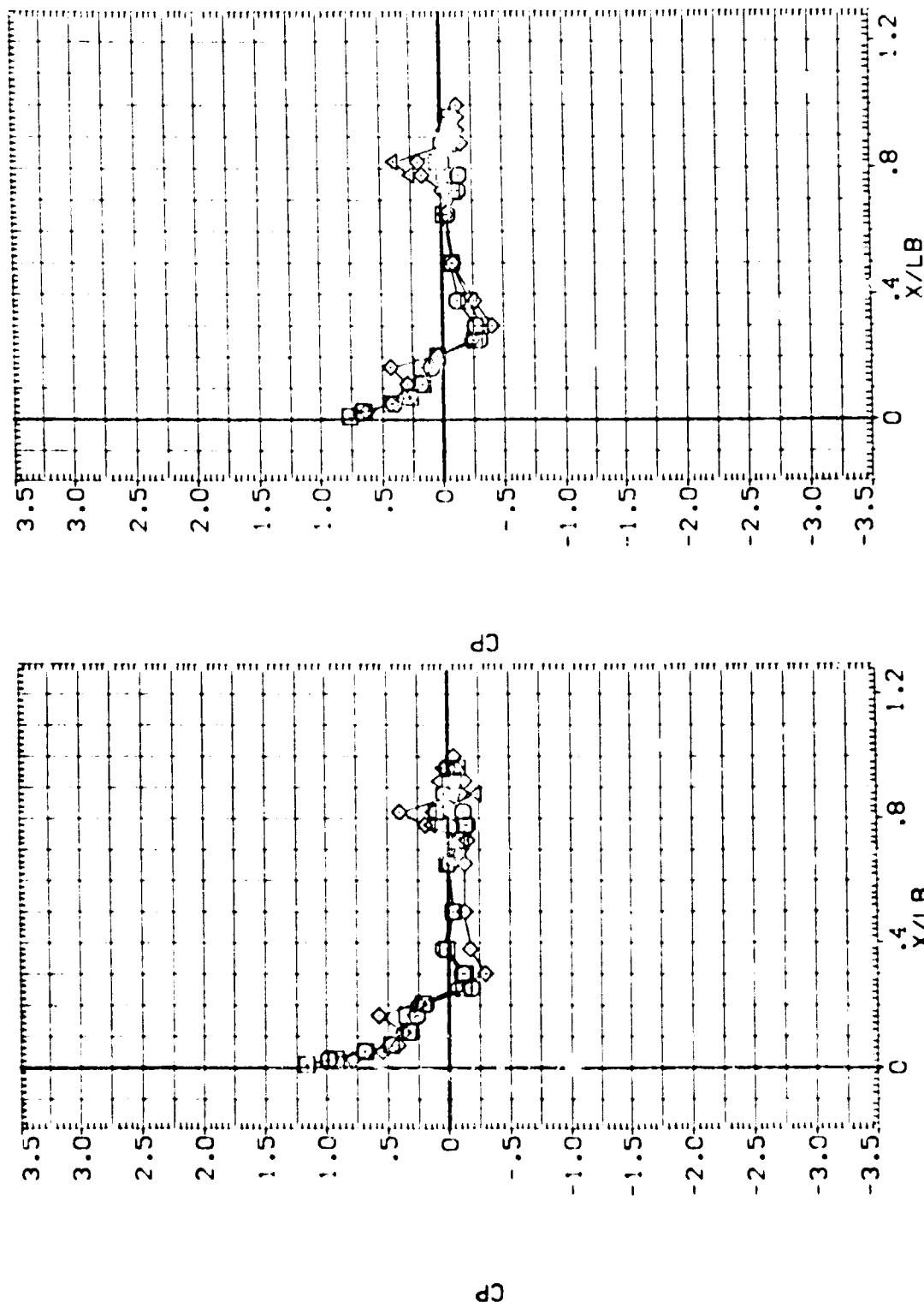
SYMBOL
 O
 □
 ◇
 △

PHI 70.000
 90.000
 120.000
 135.000

BETA0 -0.090
 .020

ALPHA0 -1.370

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 OPB. FUSELAGE (RB1B40)

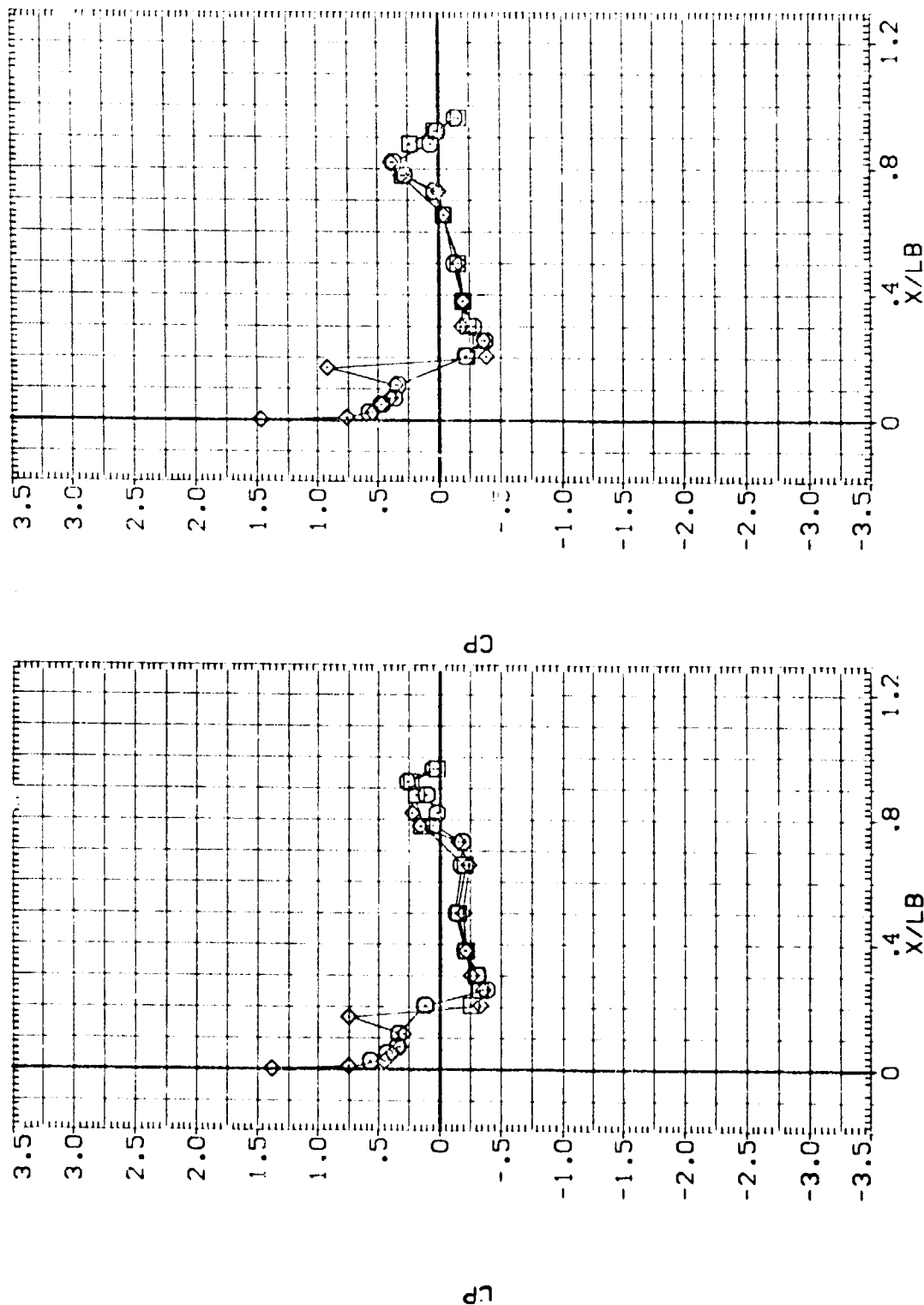
SYMBOL
 ○
 □
 ◇

PHI
 150.000
 165.000
 180.000

BETA0
 -8.090
 .020

ALPHA0
 -.370

PARAMETRIC VALUES
 MACH 1.400 ELEVON .000
 RUDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IAI4 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

SYMBOL

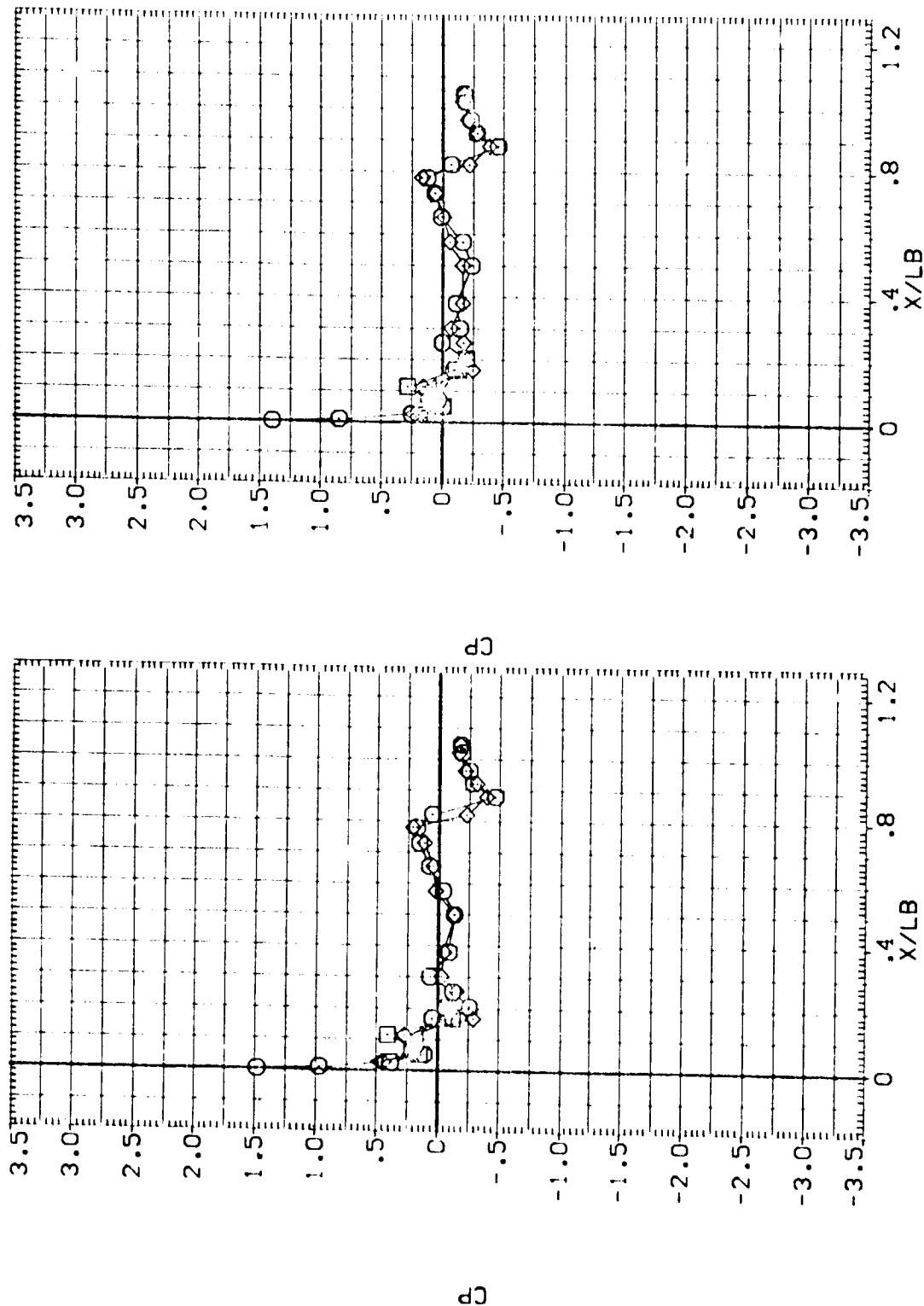
○ □ ◇ △

PHI .000
20.000
40.000
55.000

BETA0 4.090
8.140

ALPHA0 -.390

PARAMETRIC VALUES
MACH 1.400
RUDDER .000
ELEVON .000
SPOBRK .000

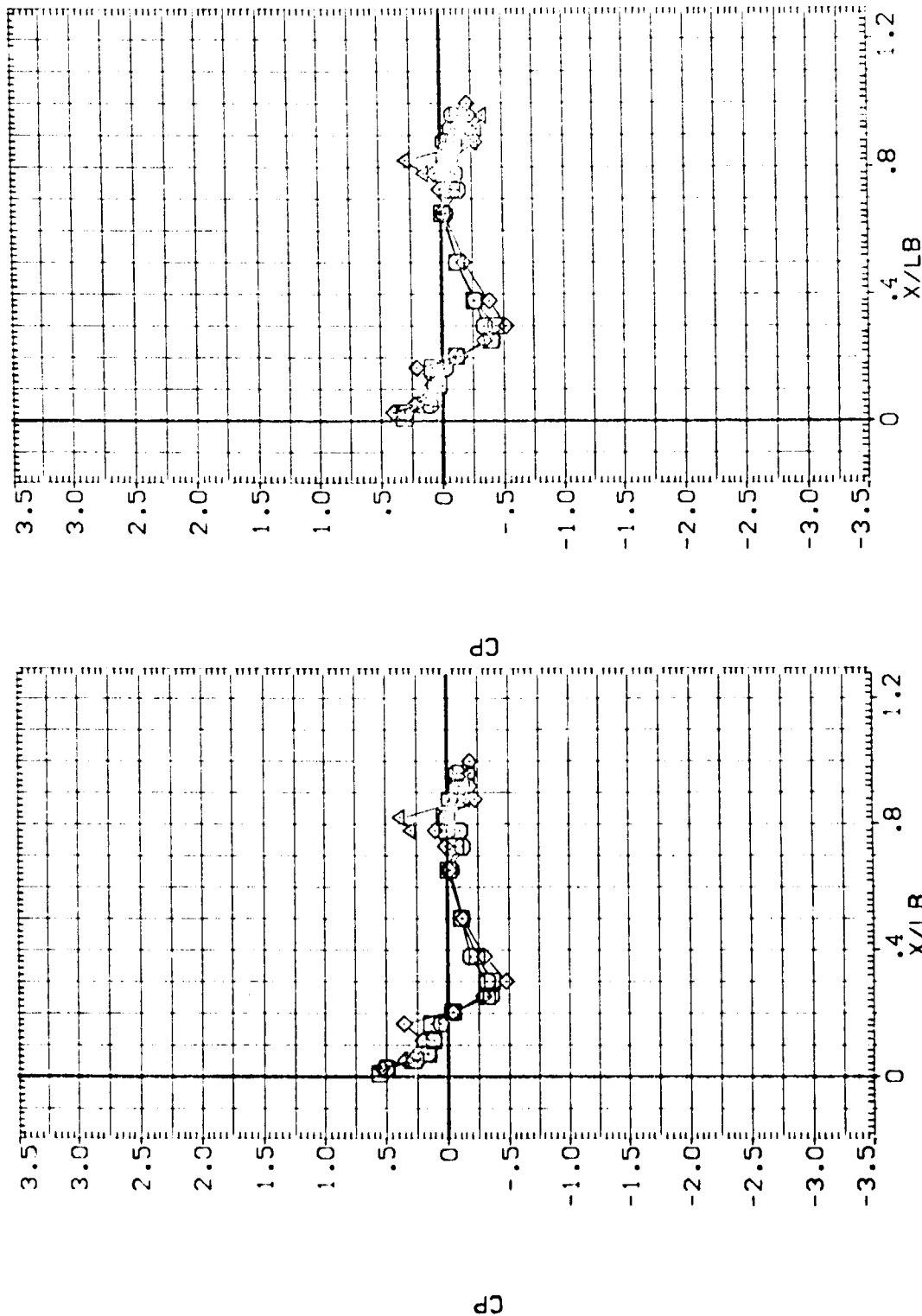


LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 C1+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

PARAMETRIC VALUES
MACH 1.400
RUDDER .000
ELEVON .000
SPDBRY .000

SYMBOL
70.000
90.000
120.000
135.000
PHI
BETA0 4.090
ALPHA0 -3.90
8.140



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

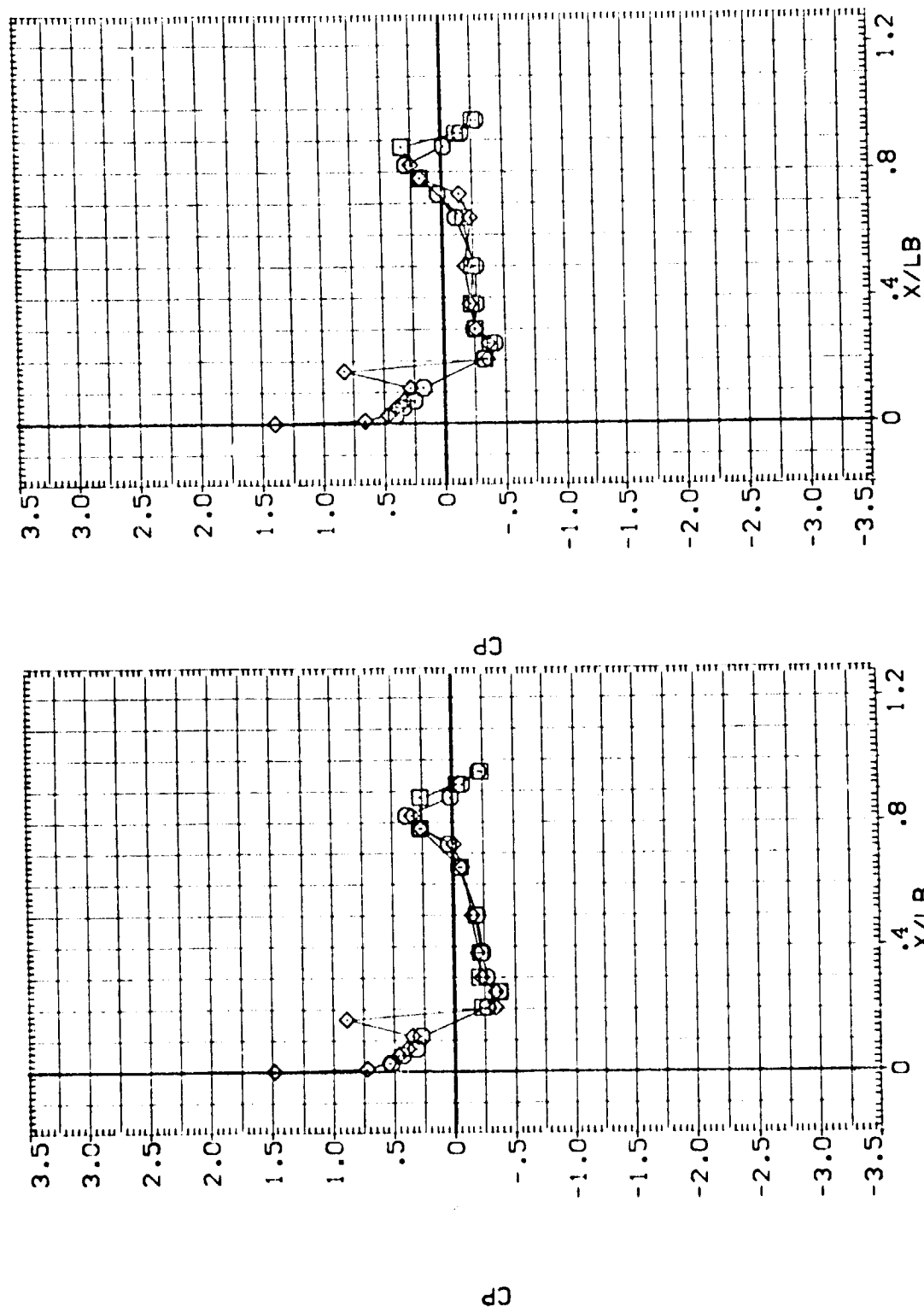
SYMBOL
 ○ □ ◇

PHI 150.00
 165.000
 180.000

BETA 4.090
 8.140

ALPHA 0
 -0.390

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

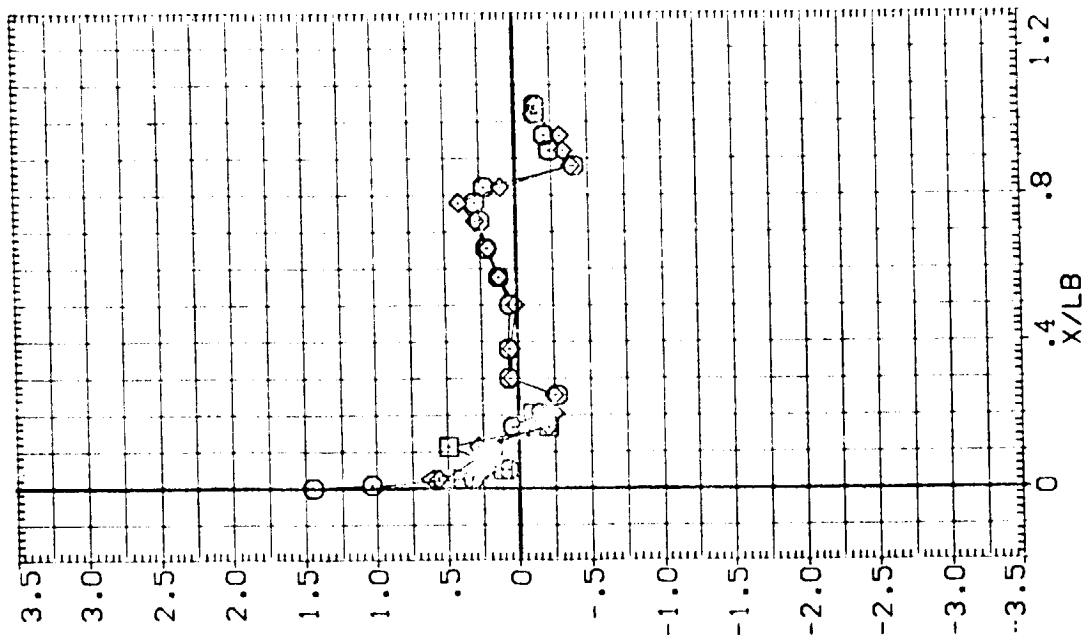
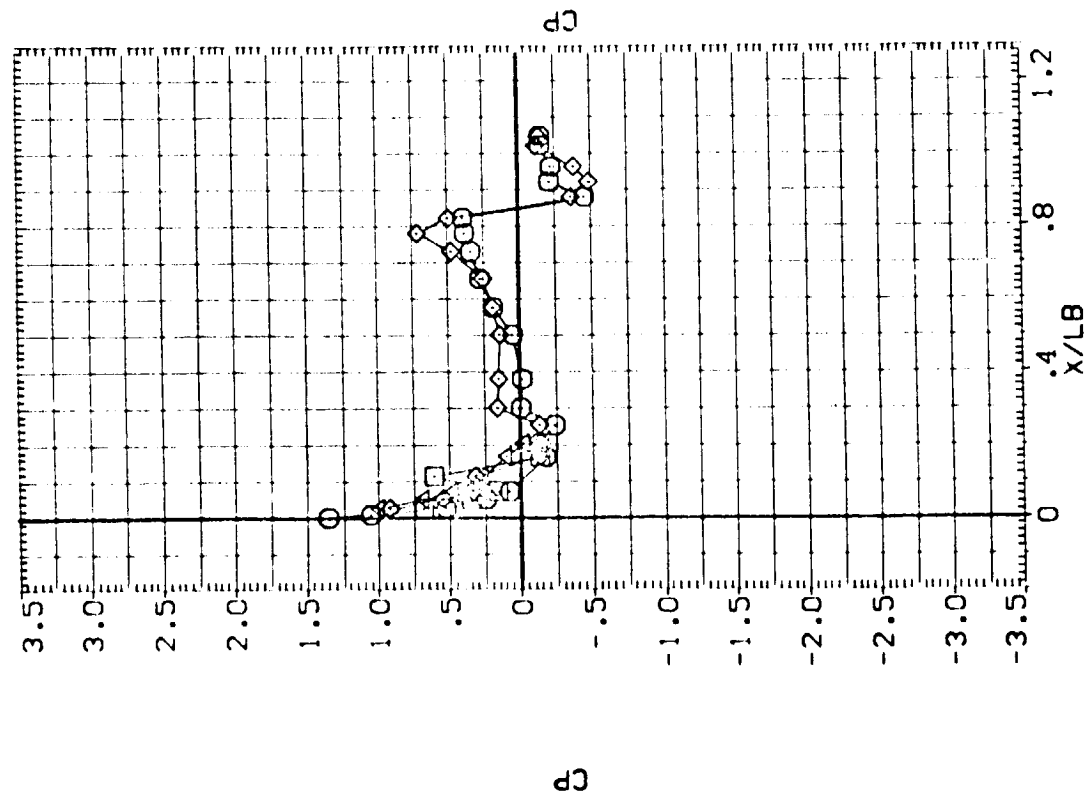
SYMBOL
 ○
 □
 ◇
 △

PHI
 .000
 20.000
 40.000
 55.000

BETA0
 -8.060
 .030

ALPHA0
 8.000

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

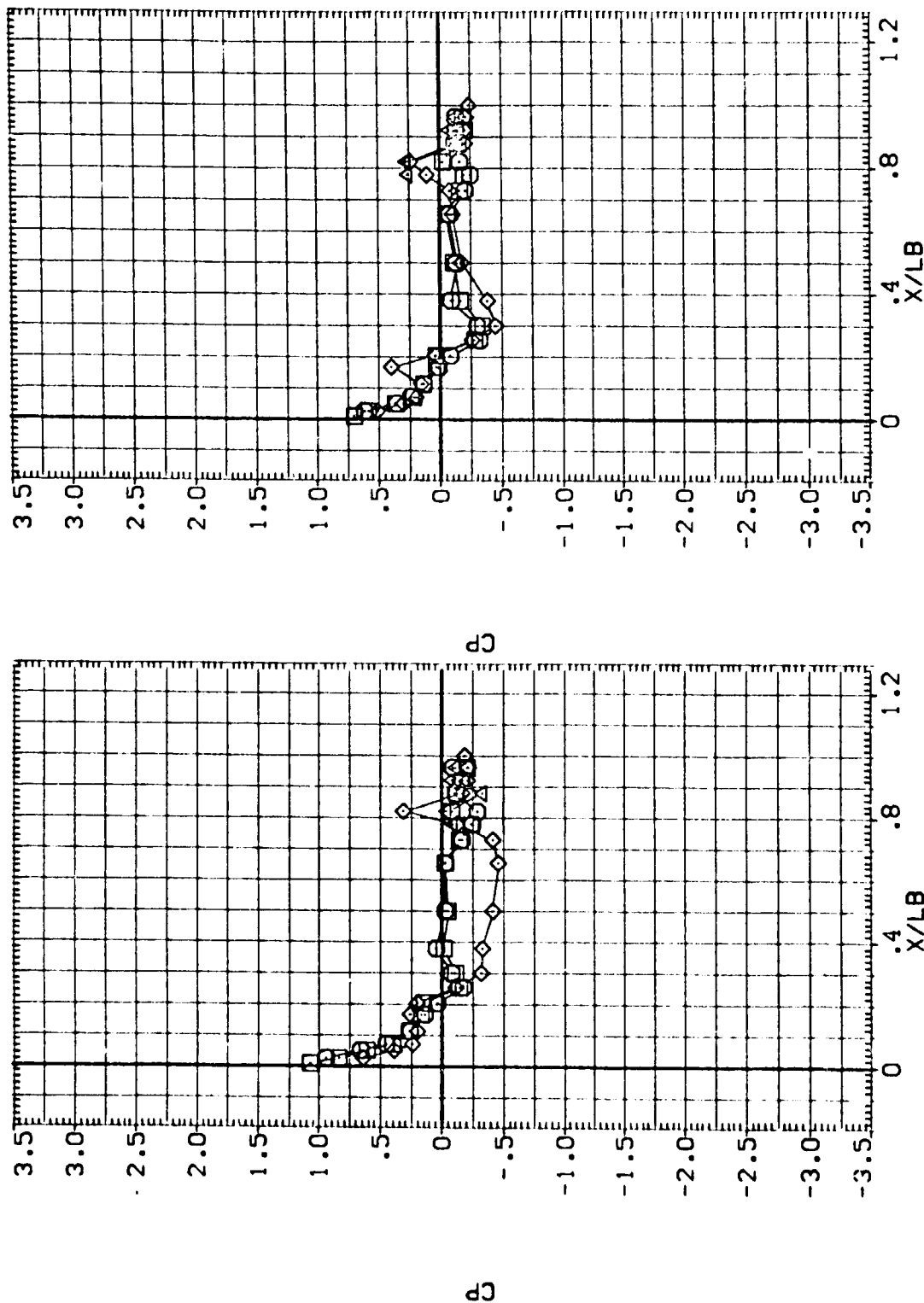
SYMBOL
 ○
 □
 ◇
 △

PHI
 70.000
 90.000
 120.000
 135.000

BETA
 -8.060
 .030

ALPHA
 8.000

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

SYMBOL
 ○
 □
 ◇

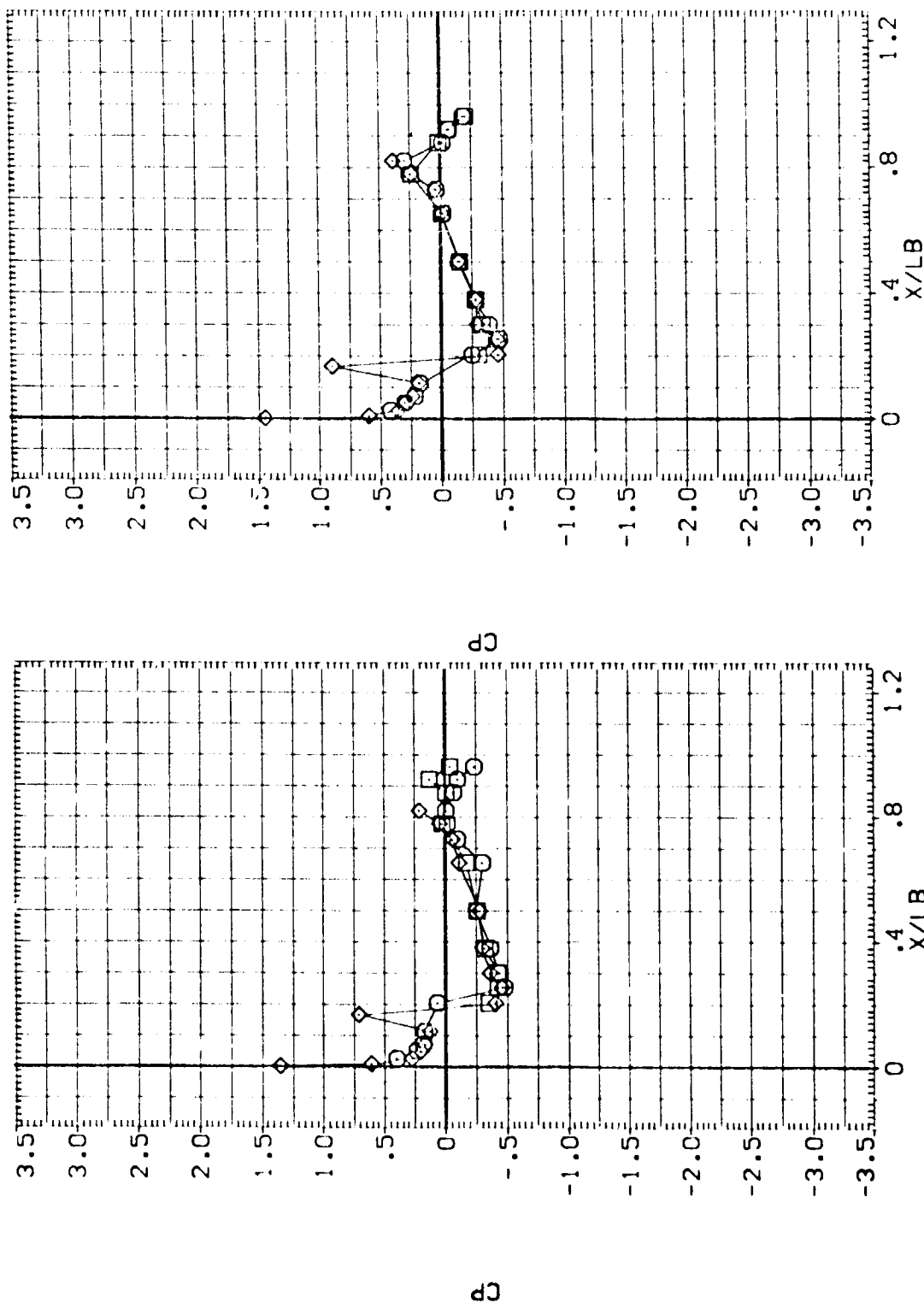
MAI
 150.000
 165.000
 180.000

BETA0
 -8.060
 .030

ALPHA0
 8.000

MACH
 RUDDER

PARAMETRIC VALUES
 1.400
 .000
 ELEV/DN
 SPOBRK
 .000
 .000



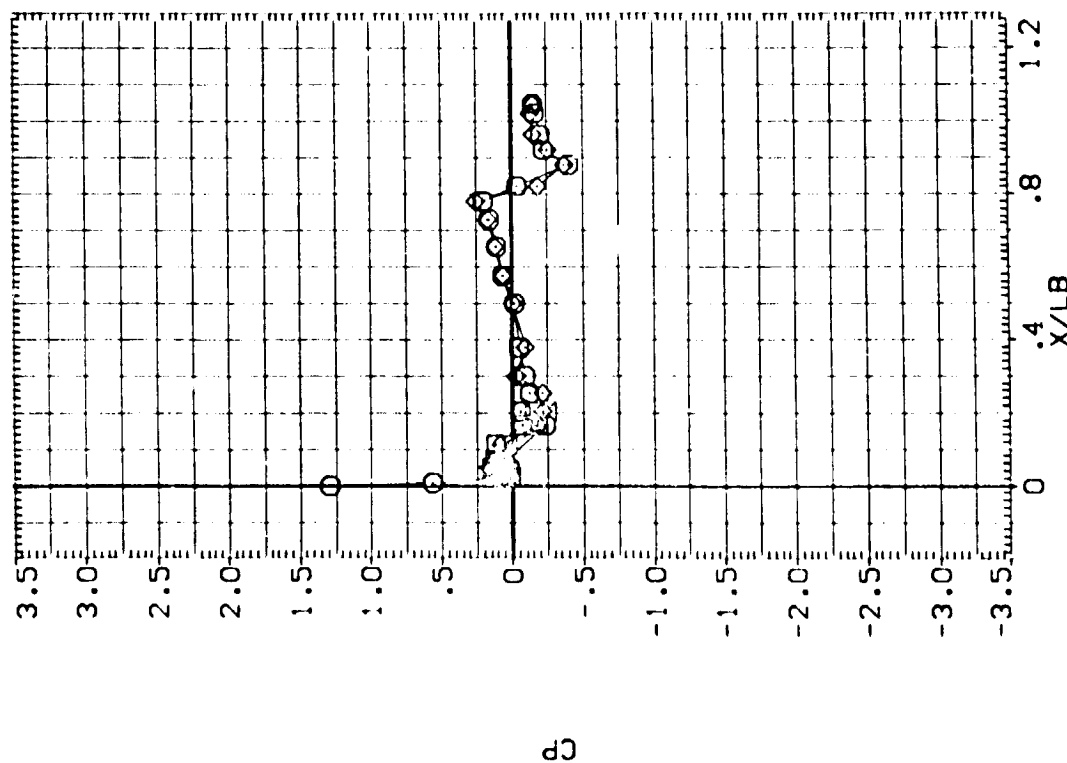
LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPDBRK .000

PHI .000
 BETA 8.210
 ALPHA 8.000
 20.000
 40.000
 55.000

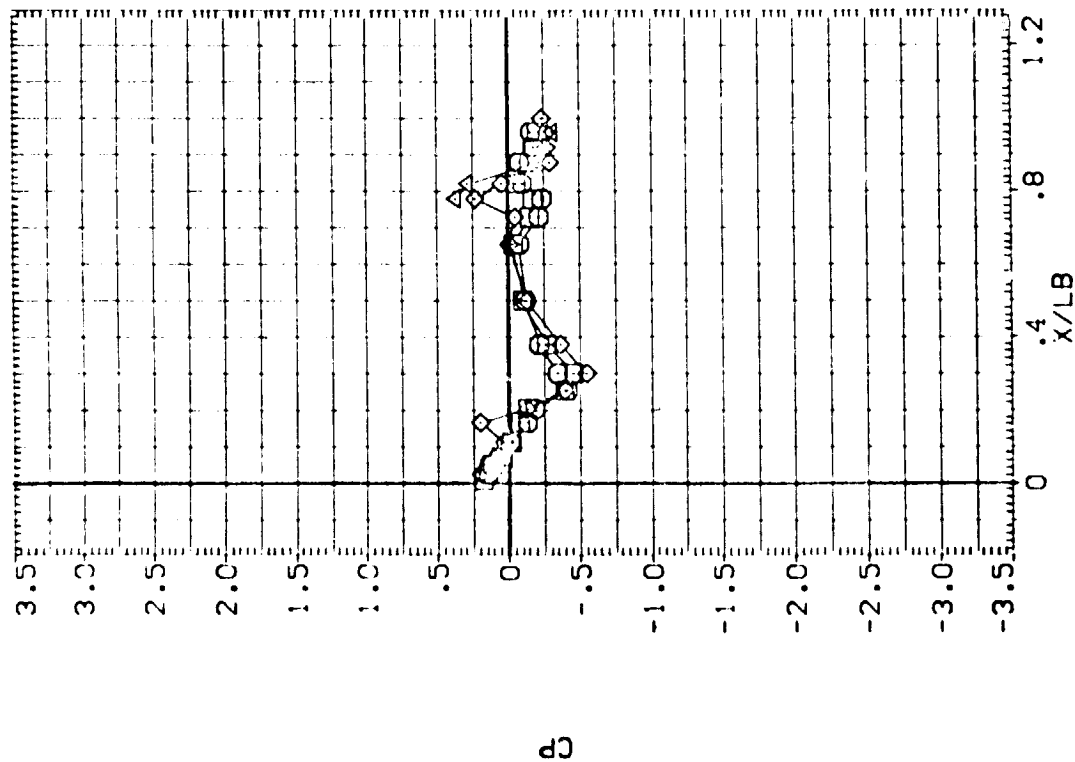
SYMBOL
 ○ □ ◇ △



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

SYMBOL	PHI	BETA	ALPHA	MACH	PARAMETRIC VALUES
○	70.000	8.210	8.000	RUDDER	1.400 ELEVON
◇	90.000				.000 SPOILER
△	120.000				
	135.000				



LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 ORB. FUSELAGE (RB1B40)

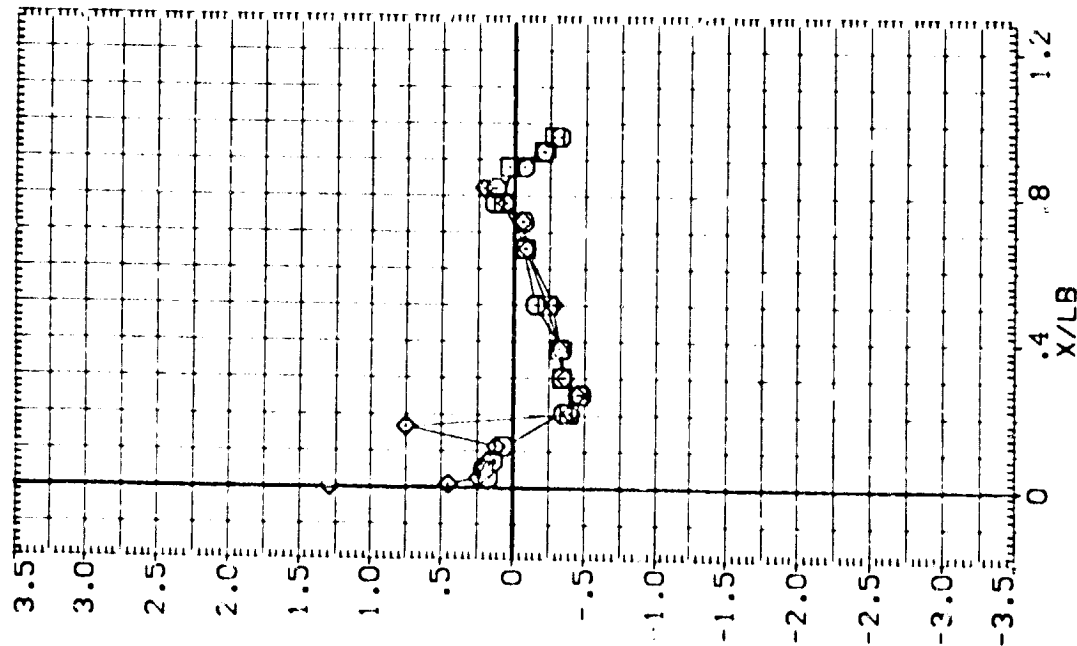
SYMBOL

PHI
150.000
165.000
180.000

BETA
8.210
8.000

PARAMETRIC VALUES

MACH 1.400
RUDDER .000
ELEVON .000
SPOILER .000



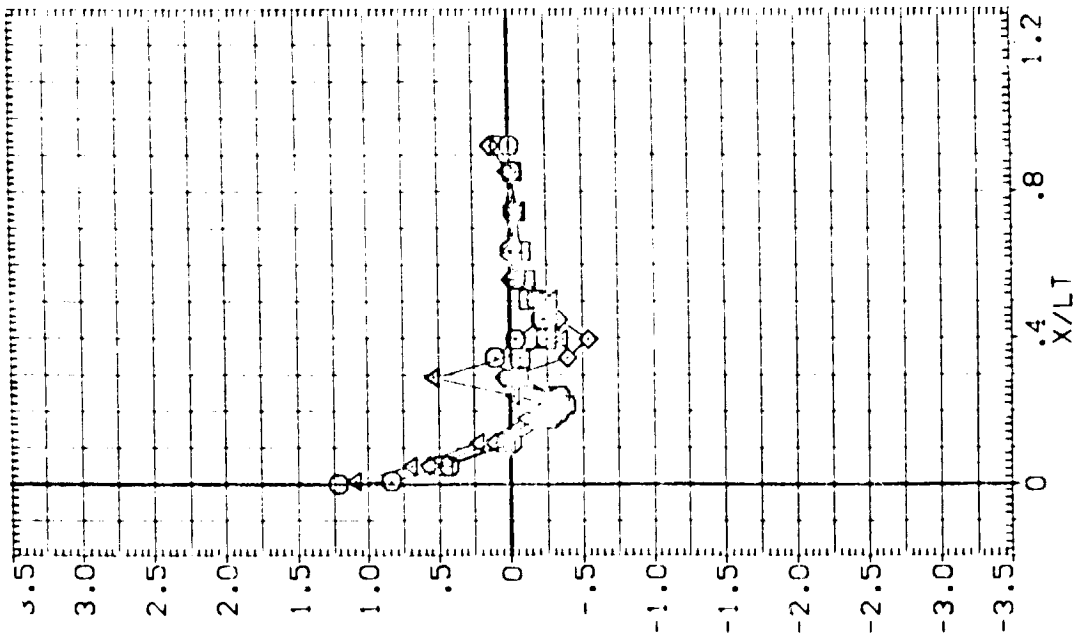
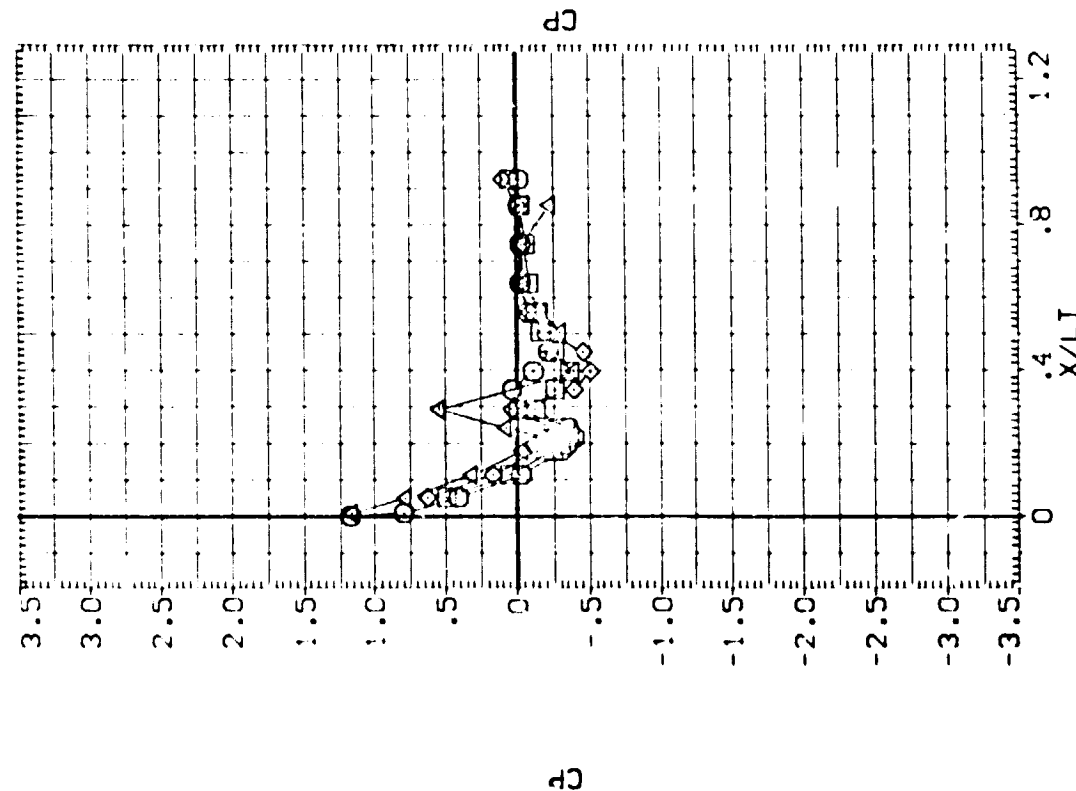
LONGITUDINAL DISTRIBUTION OF ORBITER FUSELAGE PRESSURES

ARC11-716 (A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33))

SYMBOL
 ○ 0.000
 □ 30.000
 ◇ 60.000
 △ 90.000

PHI BETAO ALPHAQ
 .000 -7.960 -8.240
 30.000 -3.980

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1133)

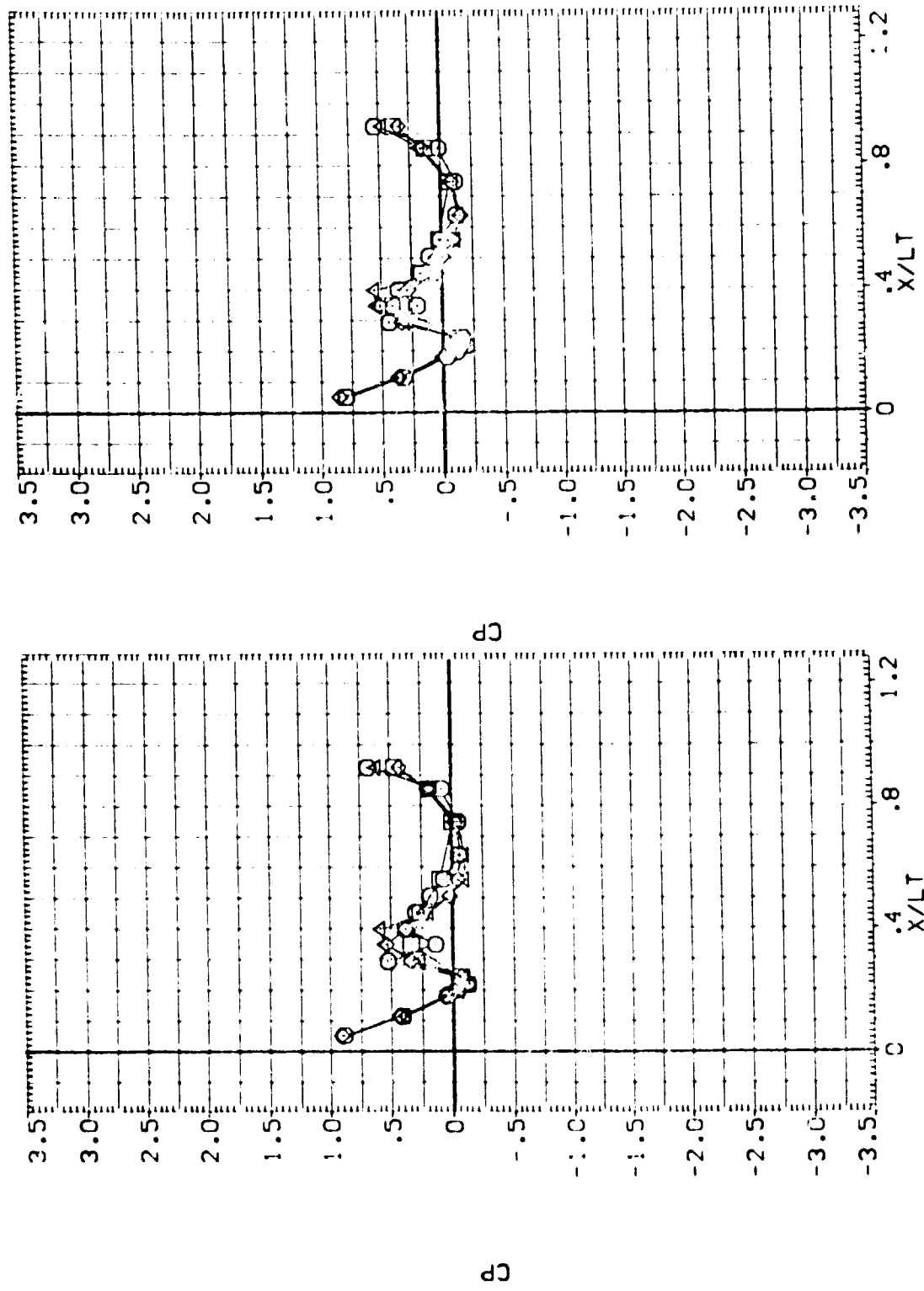
PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOILER .000

SYMBOL
 ○
 ◇
 △

PHI
 120.000
 135.000
 150.000
 165.000

BETA
 -7.960
 -3.980

ALPHA
 -8.240



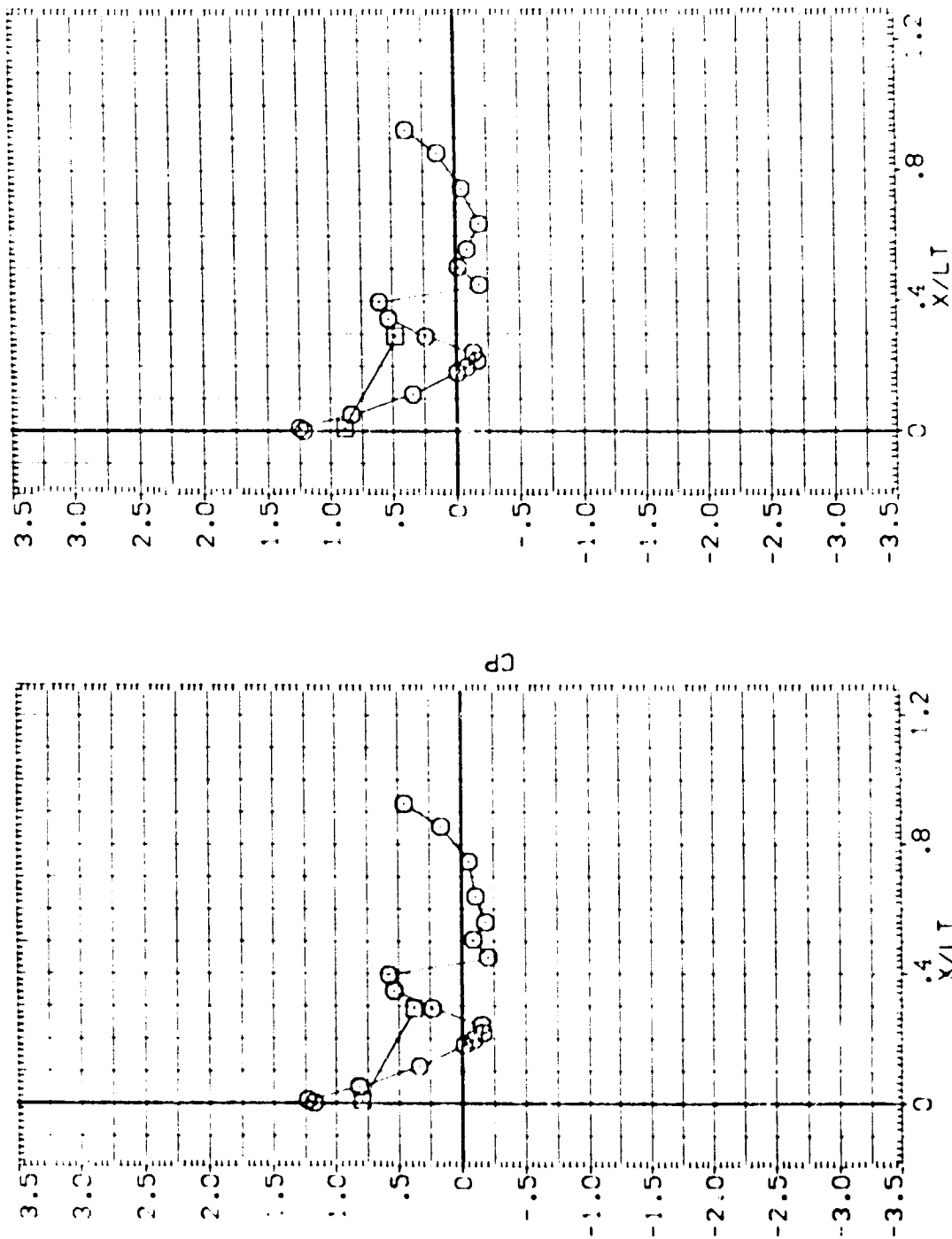
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 EXTERNAL TANK (RB1133)

SYMBOL
○

PHI BETA ALPHA
180.000 -7.960 -8.240
270.000 -3.930

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPEED .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:-7.16 [A14 0:1:12+S12N25+AT10 EXTERNAL TANK (RB1T33)

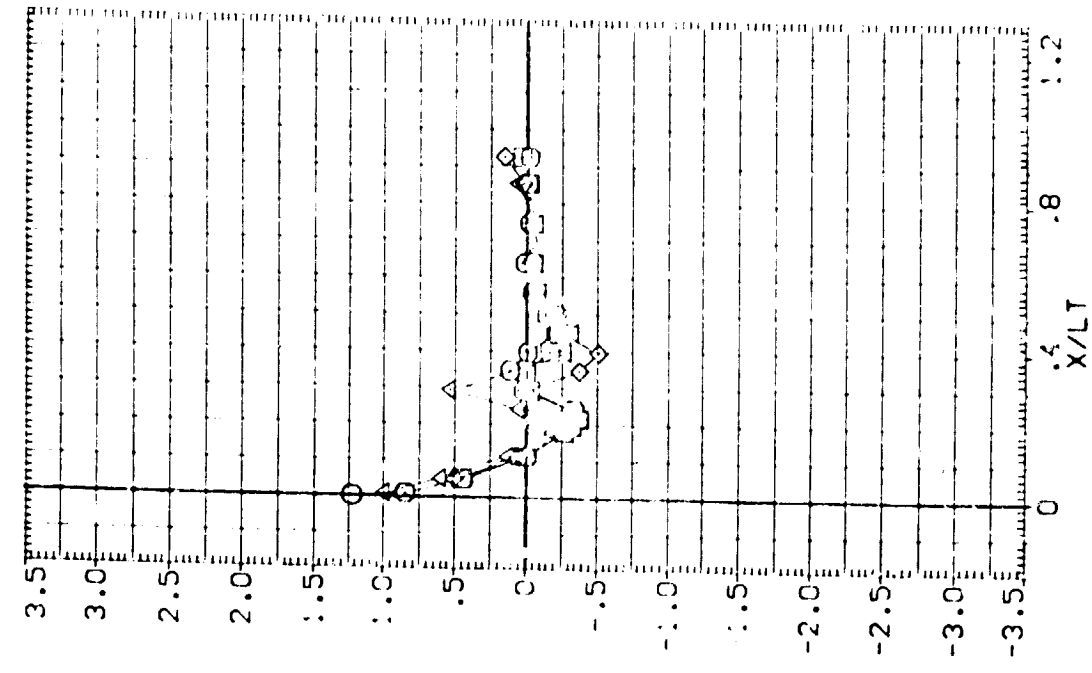
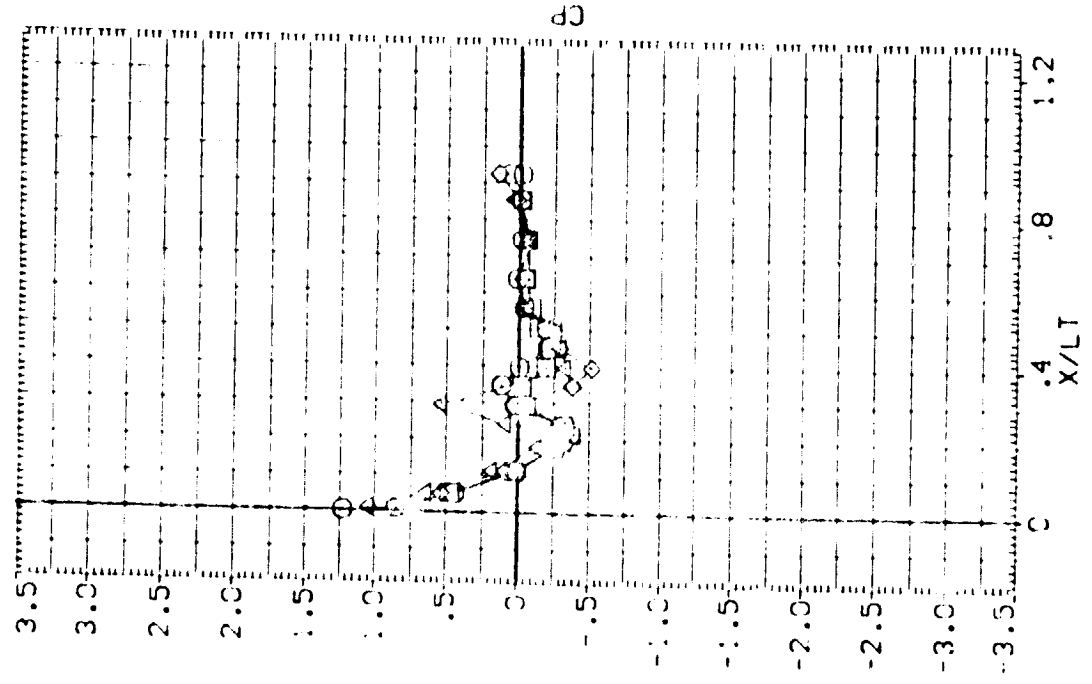
SYMB:
 O
 X
 Z

PHI .000
 30.000
 60.000
 90.000

BETAG -1.990
 .010

ALPHAS -8.250

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPDBW .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RBIT33)

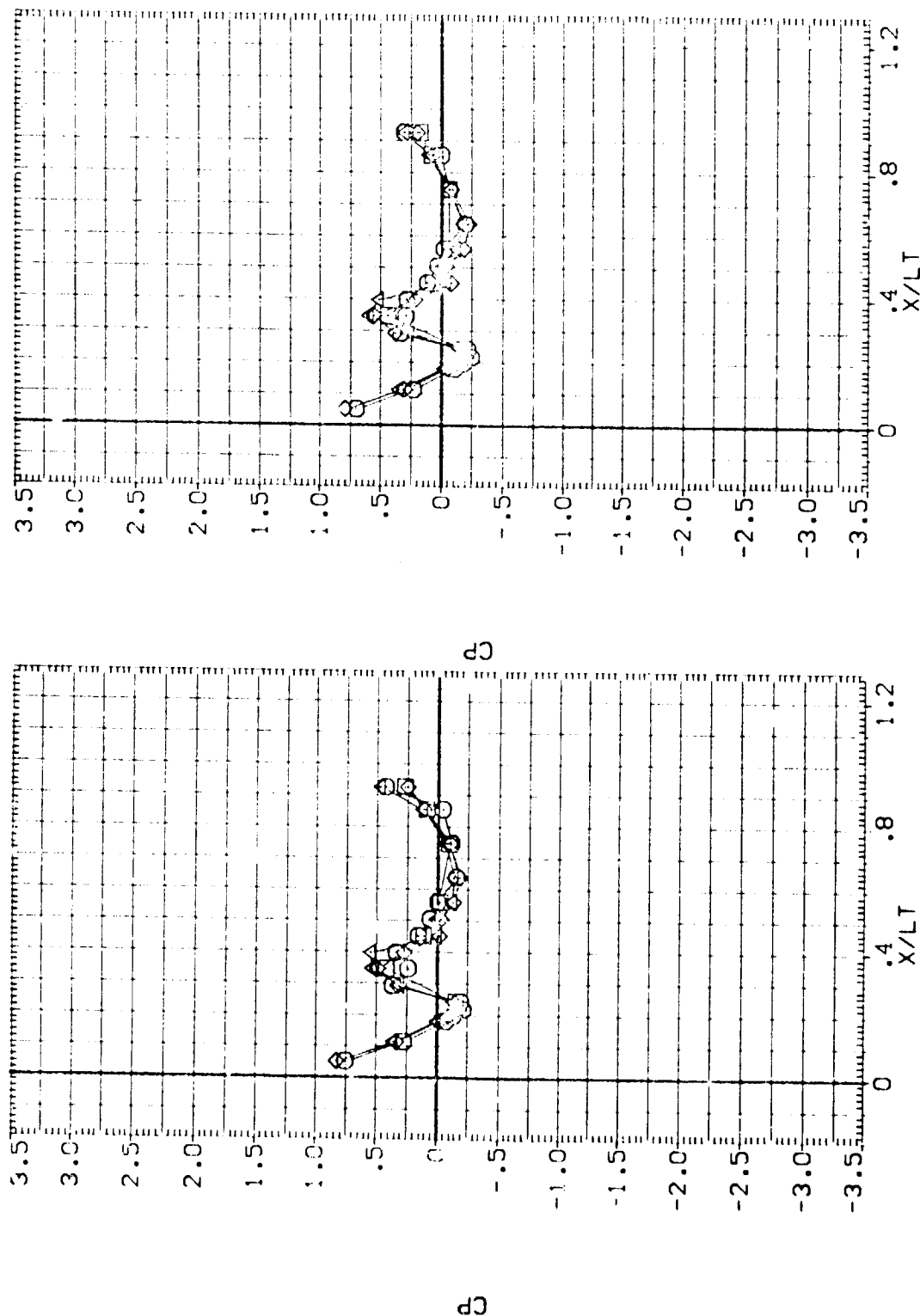
SYMBOL

PHI
120.000
130.000
150.000
155.000

BETA0
-1.890
.010

ALPHA0
-8.250

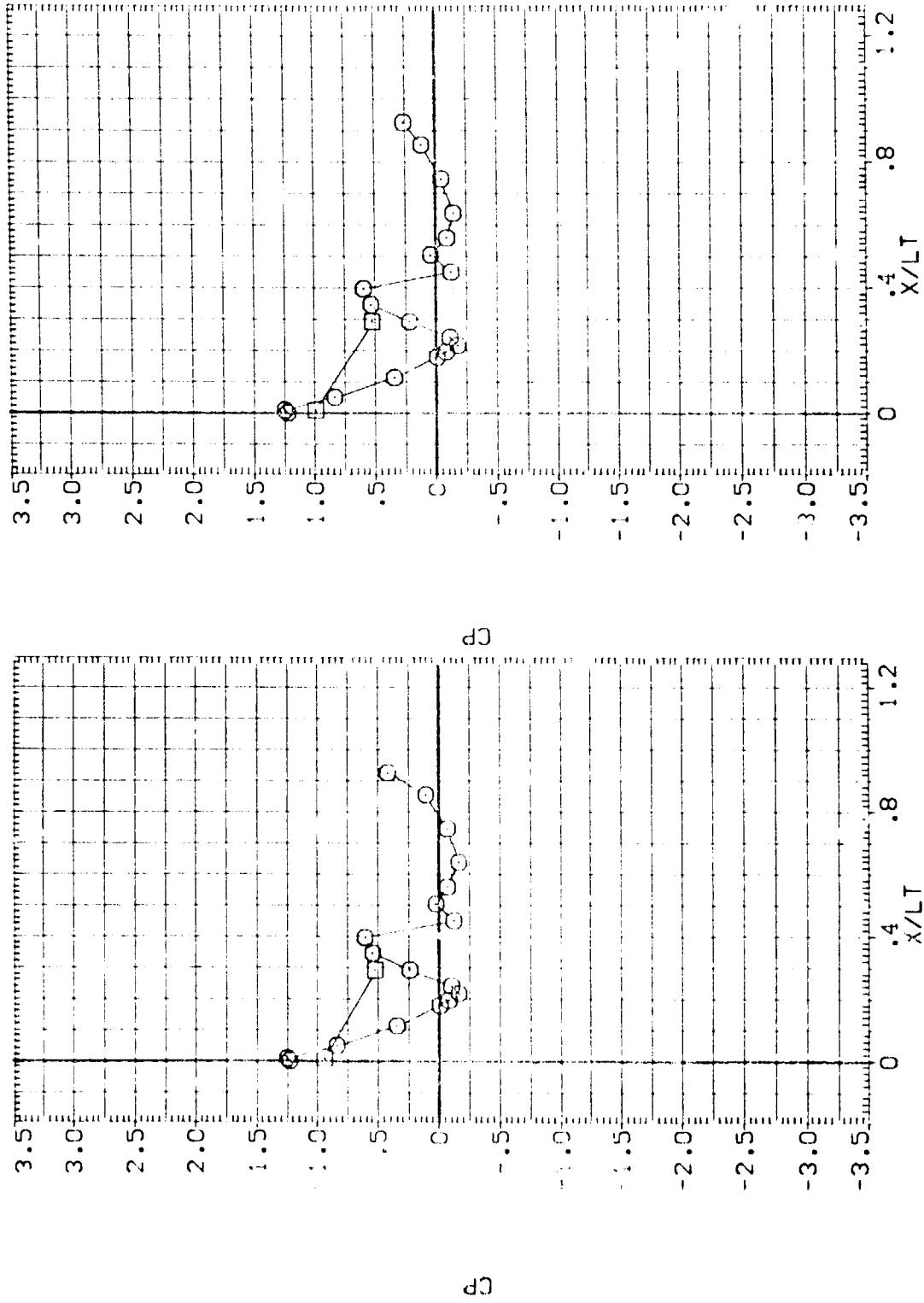
PARAMETRIC VALUES
MACH 1.7 J ELEVON .000
RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL	PHI	BETA0	ALPHA0	MACH	PARAMETRIC VALUES
	180.000	-1.990	-8.25C	1.250	ELEVON .000
	270.000	.010		.000	SPDRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 EXTERNAL TANK (RB1133)

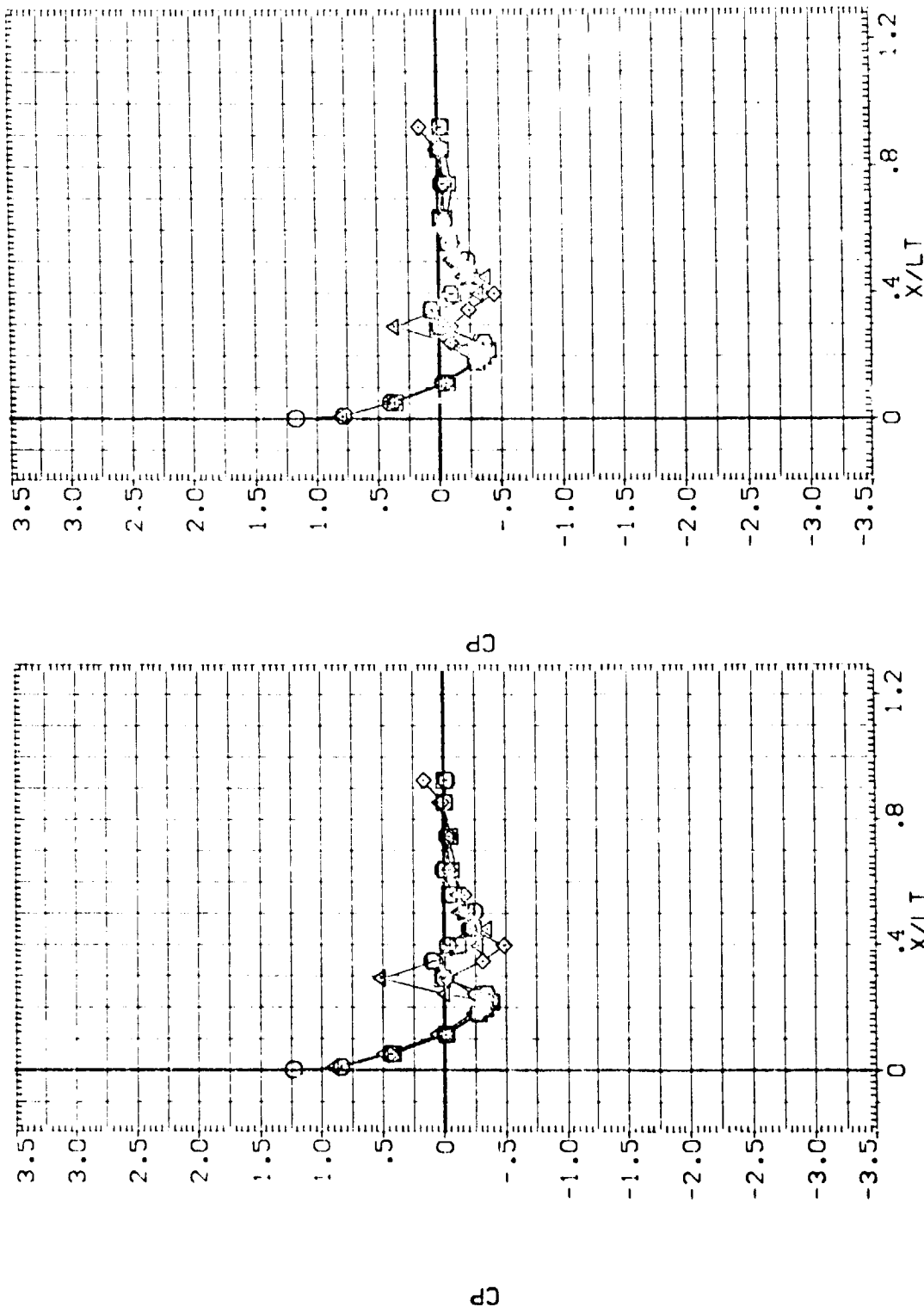
SYMBOL
○ □ ◇ △

PHI .000
30.000
60.000
90.000

BETA0 4.040
8.100

ALPHA0 -8.230

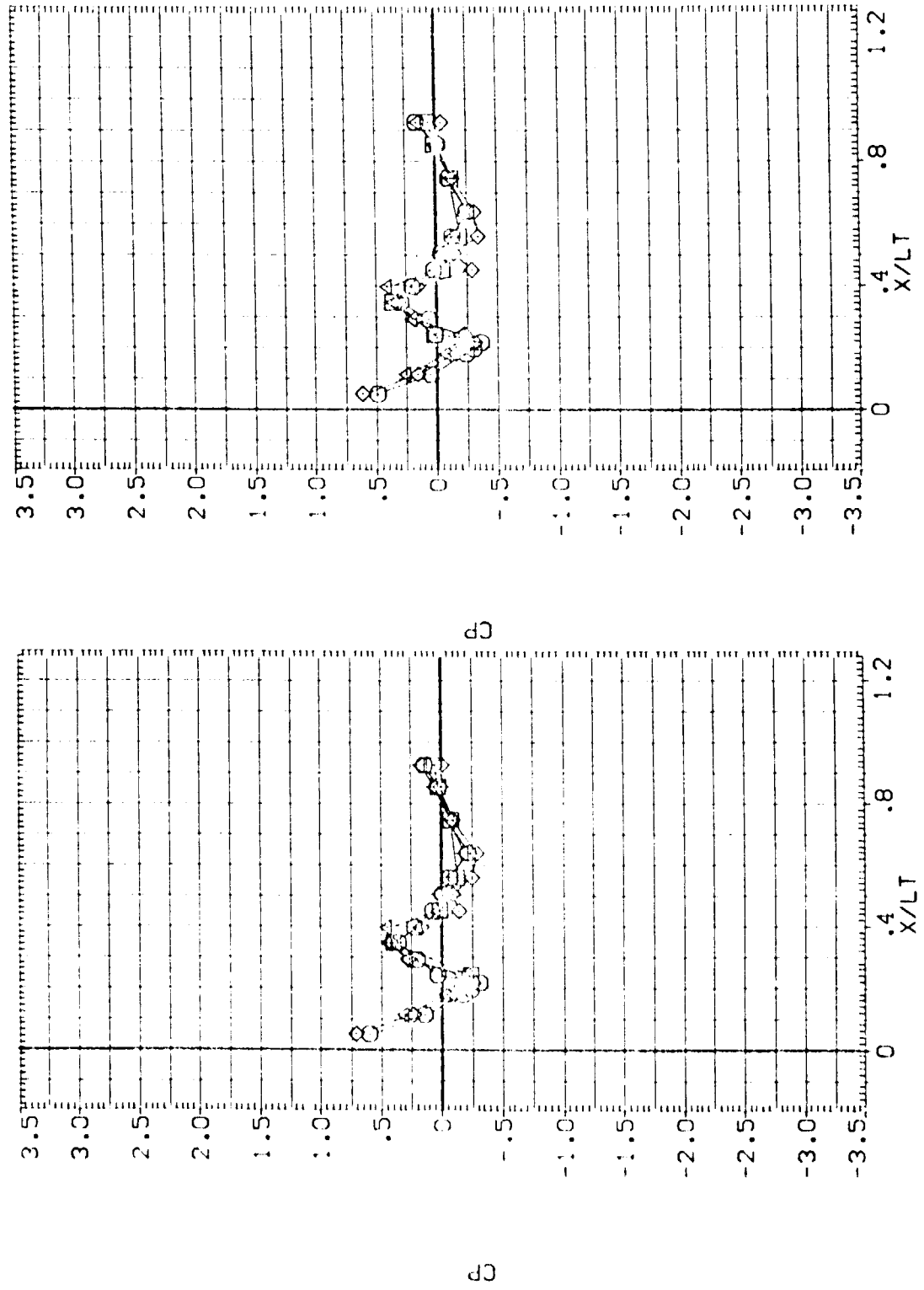
PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPDBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL	PHI	BETA	ALPHA	MACH	ELEV	SPDRK
○	120.000	4.040	-8.230	1.250	.000	.000
◇	135.000	8.100		.000	.000	.000
△	150.000					
	165.000					



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL

PHI

BETA0

ALPHA0

180.000
270.000

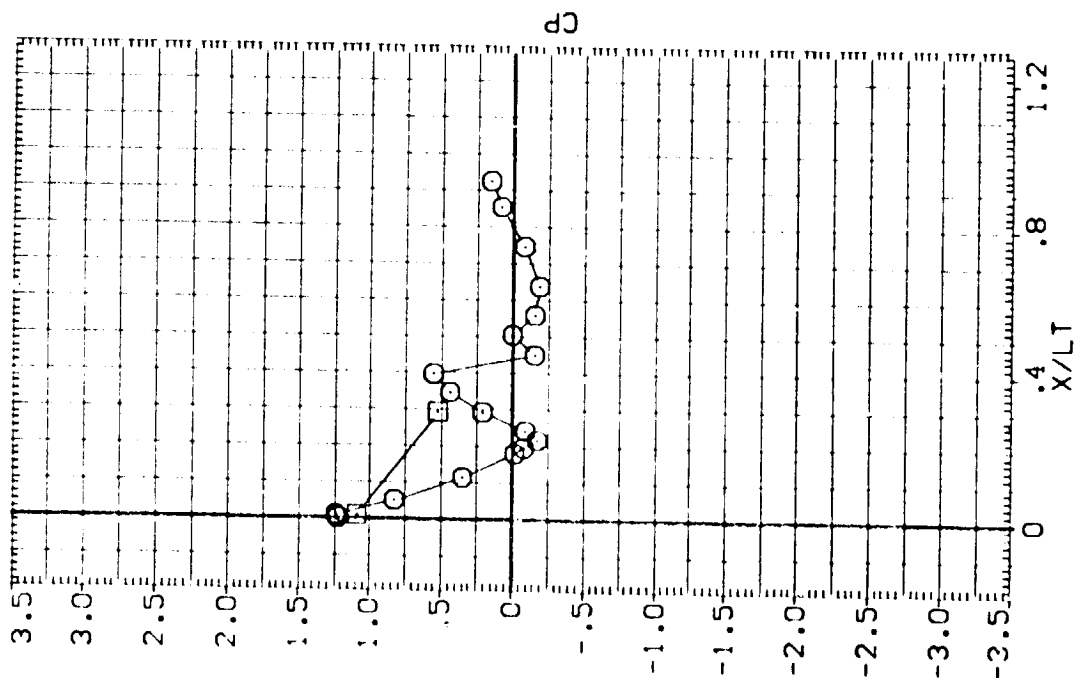
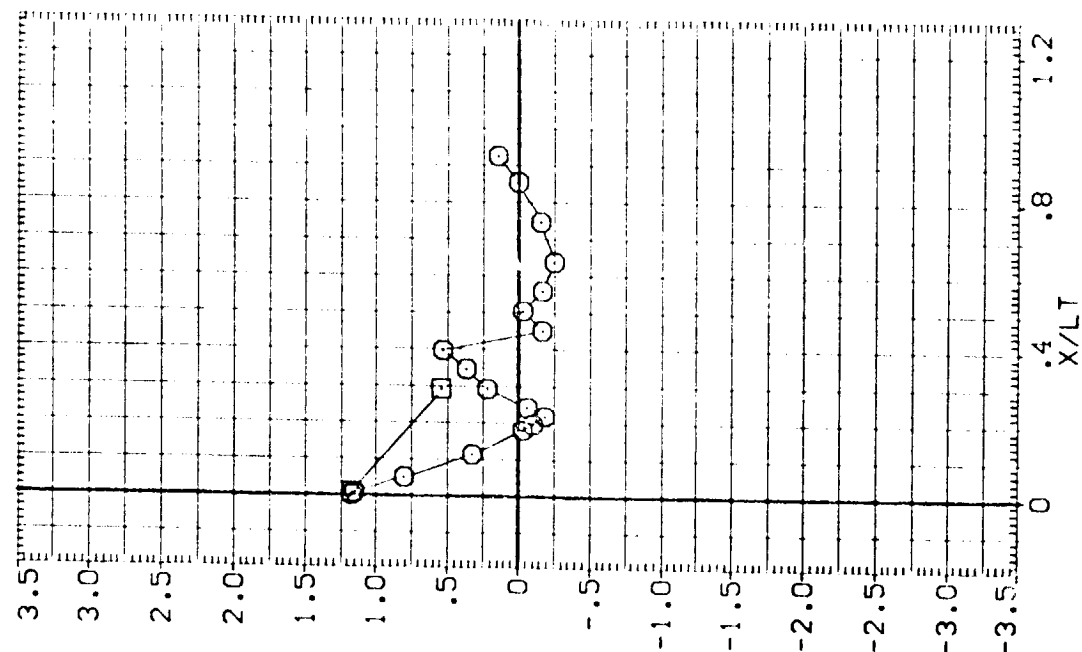
4.040
8.100

-8.230

PARAMETRIC VALUES

1.250
.000
ELEVON
SPDRK
.000
.000

MACH
RUDDER



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC1:-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

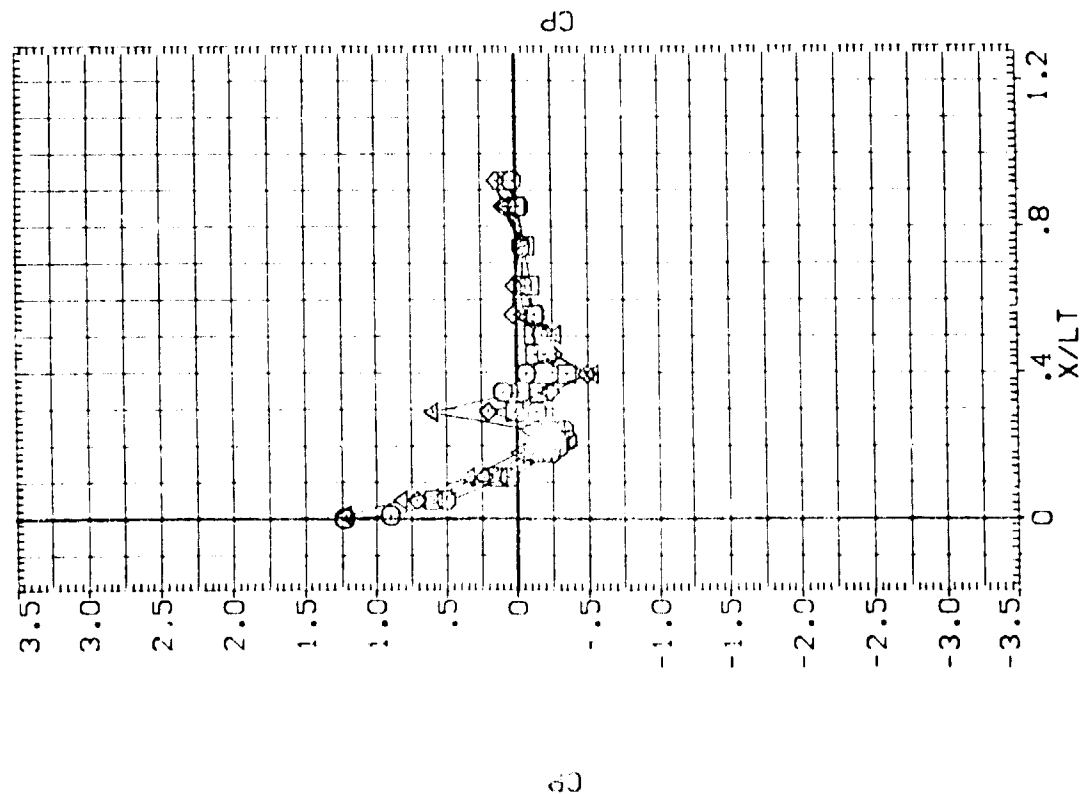
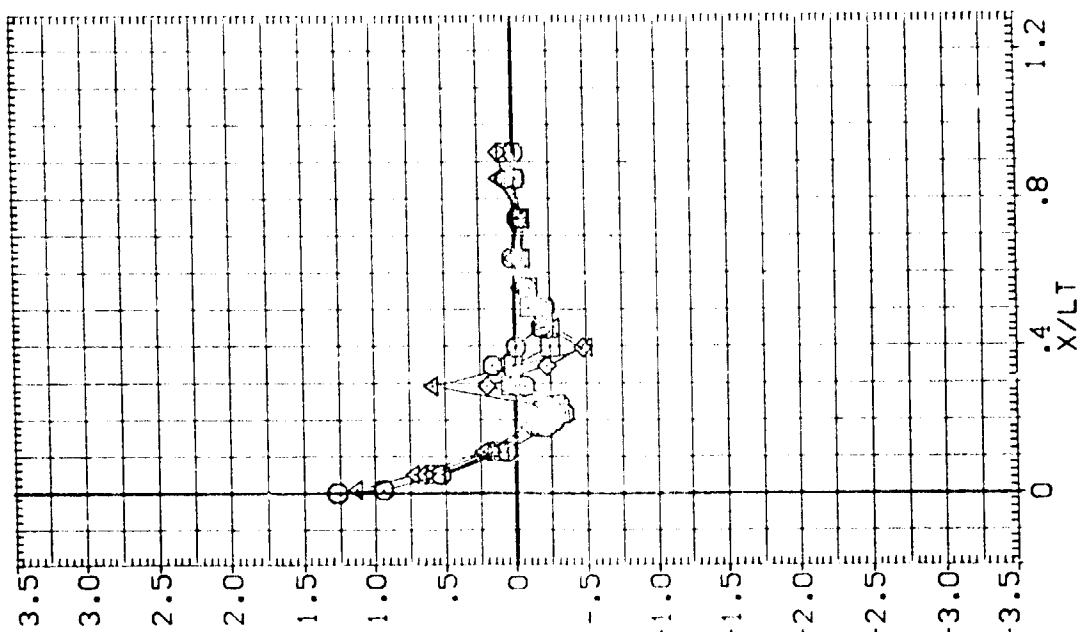
SYMBOL
 O □ ◇ △

PHI
 .000
 30.000
 60.000
 90.000

BETA0
 -7.990
 -3.950

ALPHA/O
 -4.230

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

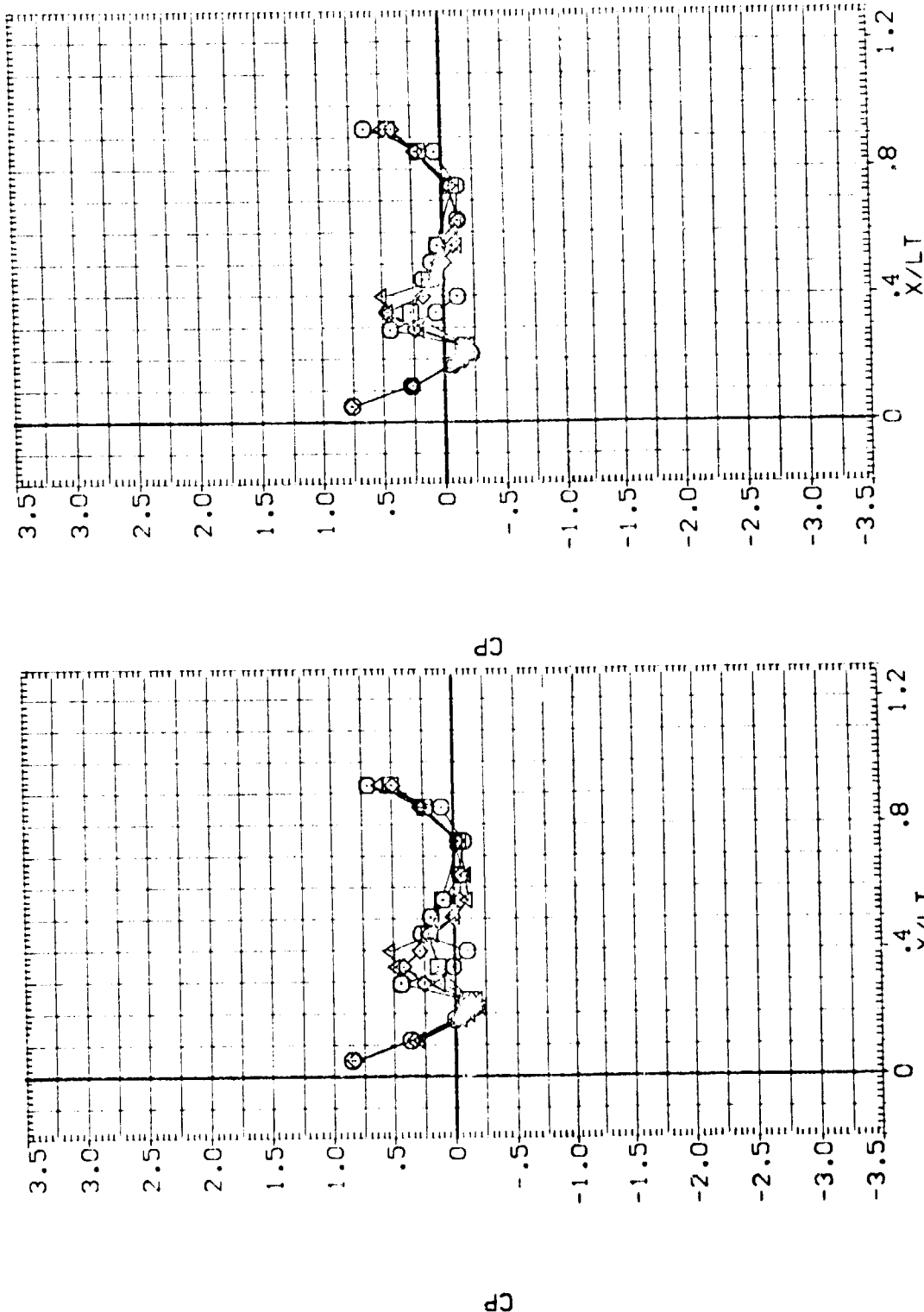
SYMBOL
 ○
 □
 ◇
 △

PHI
 120.000
 135.000
 150.000
 165.000

BETA0
 -7.990
 -3.950

ALPHA0
 -4.230

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES



ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

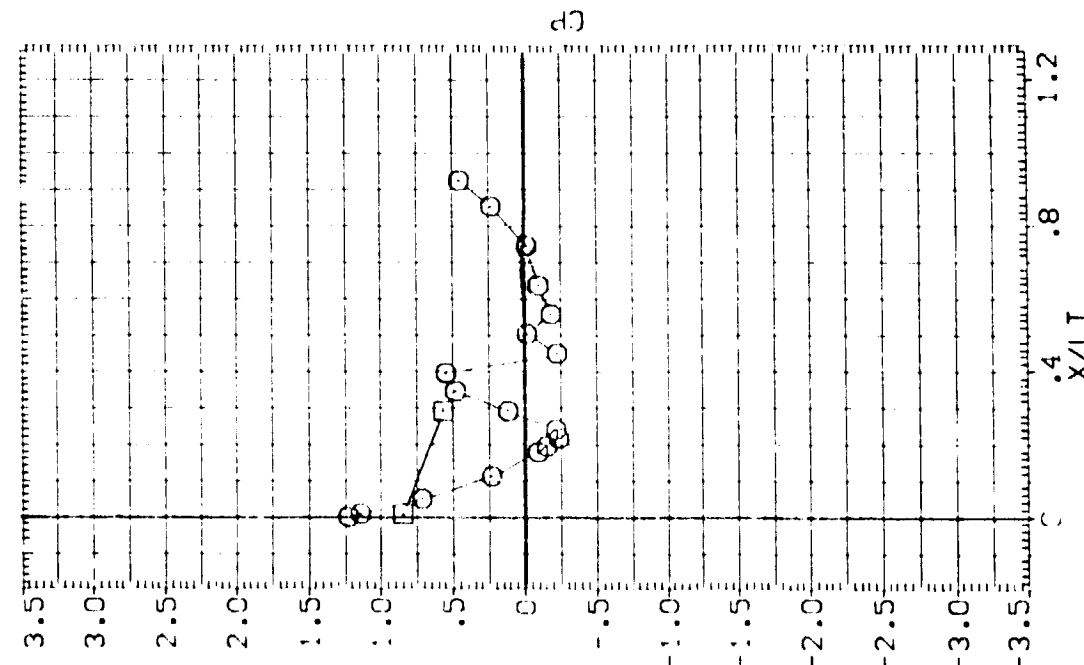
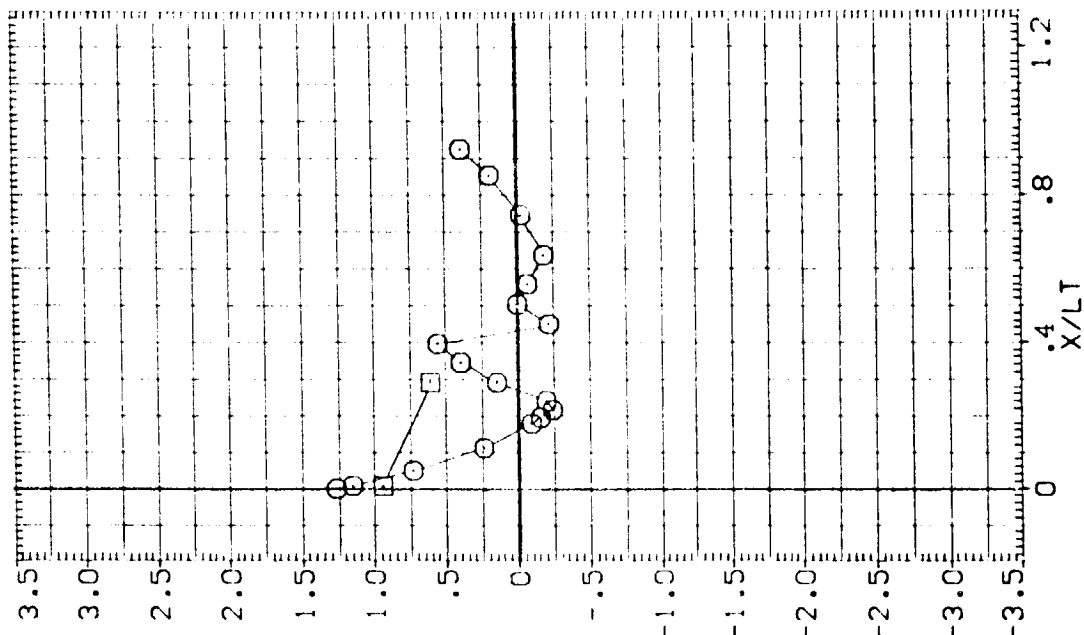
SYMBOL
()

PHI 180.000
270.000

BETA0 -7.950
-3.950

ALPHA0 -4.230

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL

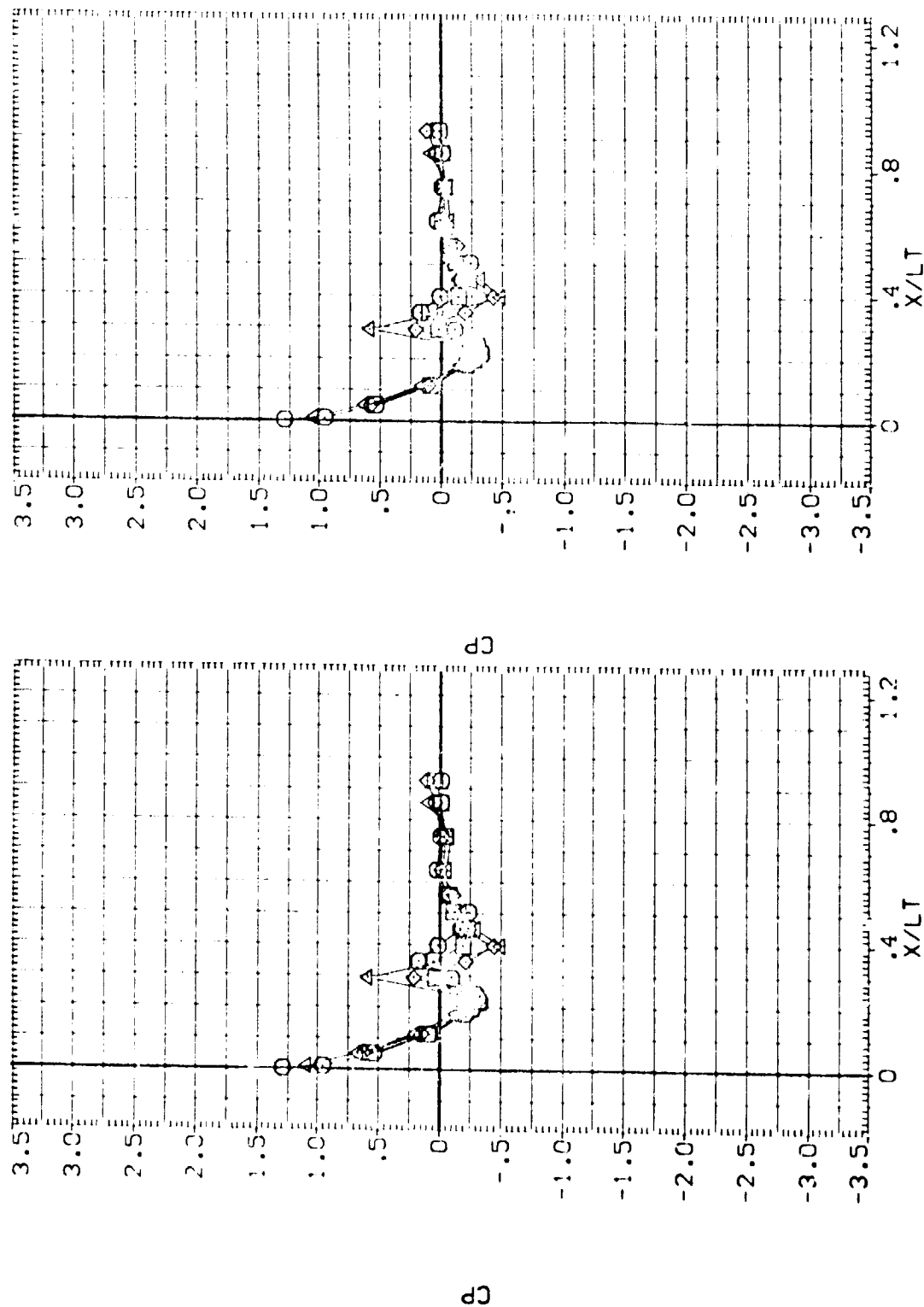
PHI
0
30.000
60.000
90.000

BETA0
-2.020
-1.010

ALPHA0
-4.150

MACH
RUDDER

PARAMETRIC VALUES
1.250
.000
ELEVON
SPDRK
.000
.000

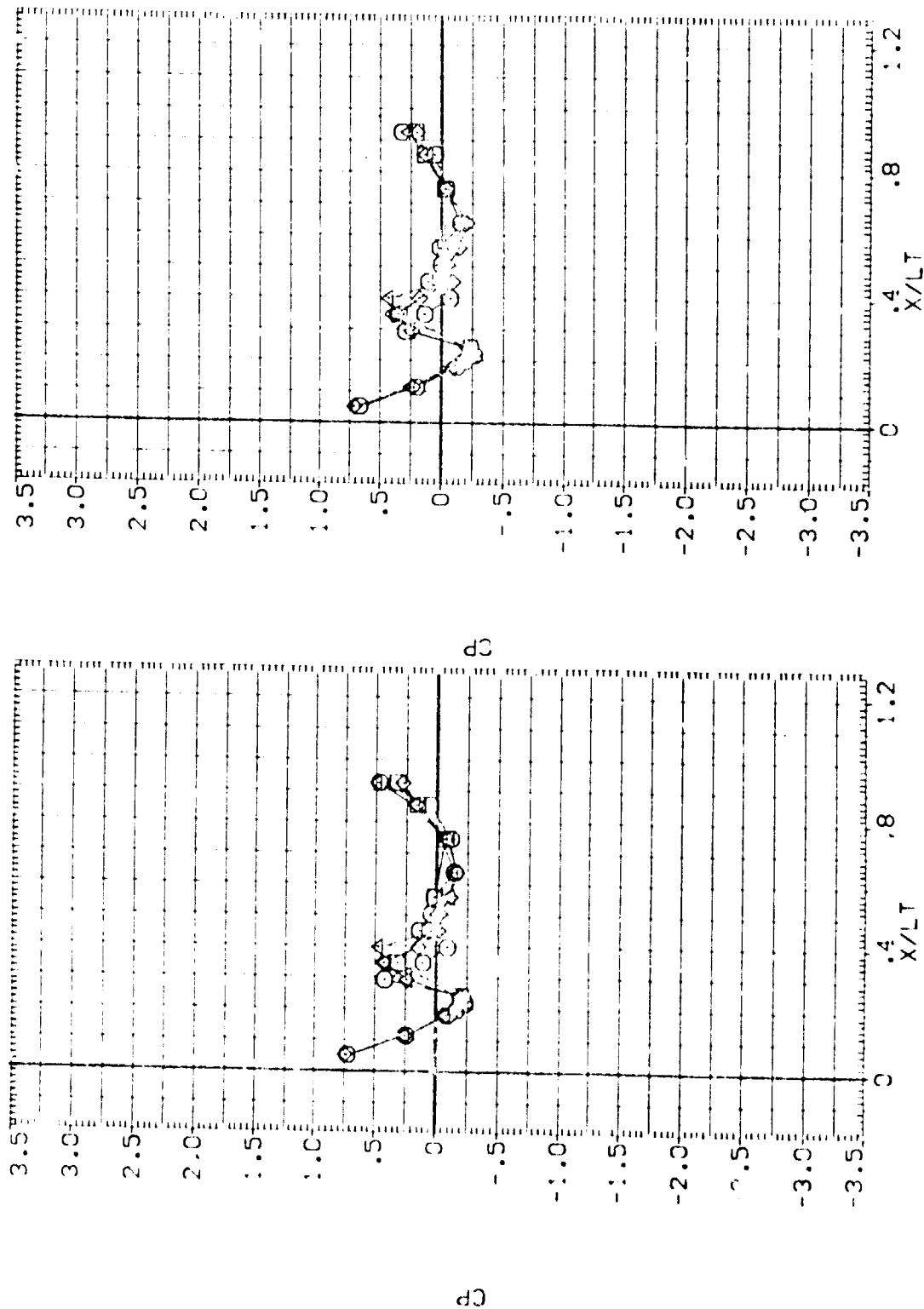


LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

PARAMETRIC VALUES
 MAC+ 1.250 ELEVON .000
 RUDDER .000 SPOILER .000

SYMBOL PH1 BETAO ALPHAC
 120.000 -2.027C -4.15C
 135.000 -1.01C
 150.000
 165.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 JA14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL

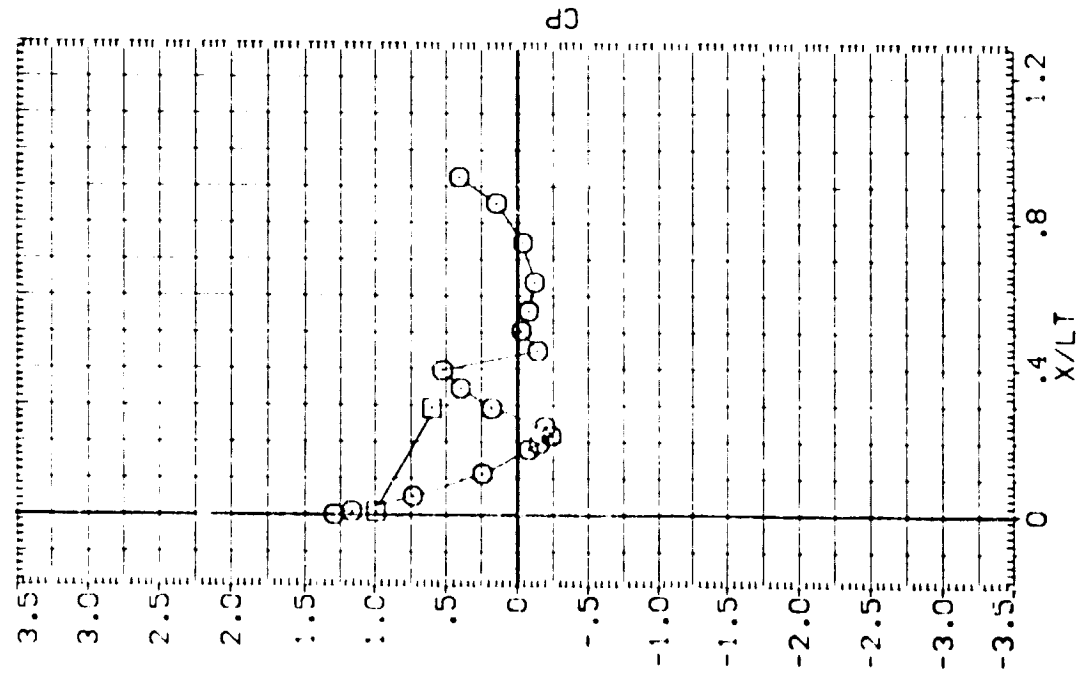
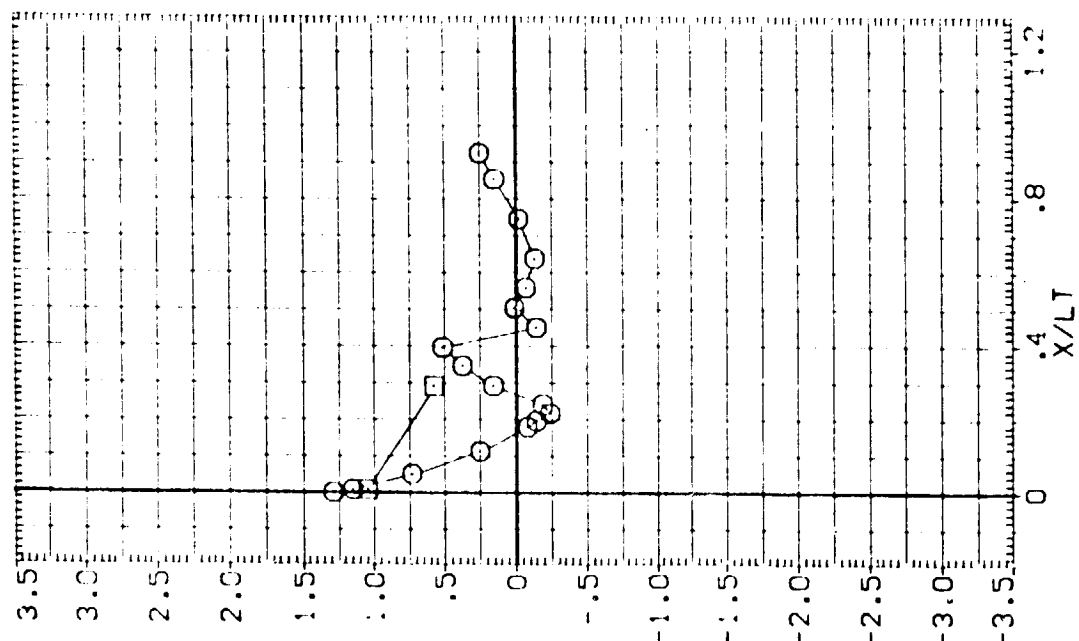
116.0.000
270.000

BETAS
-2.020
-0.010

ALPHAS
-4.150

MACH
RUDDER

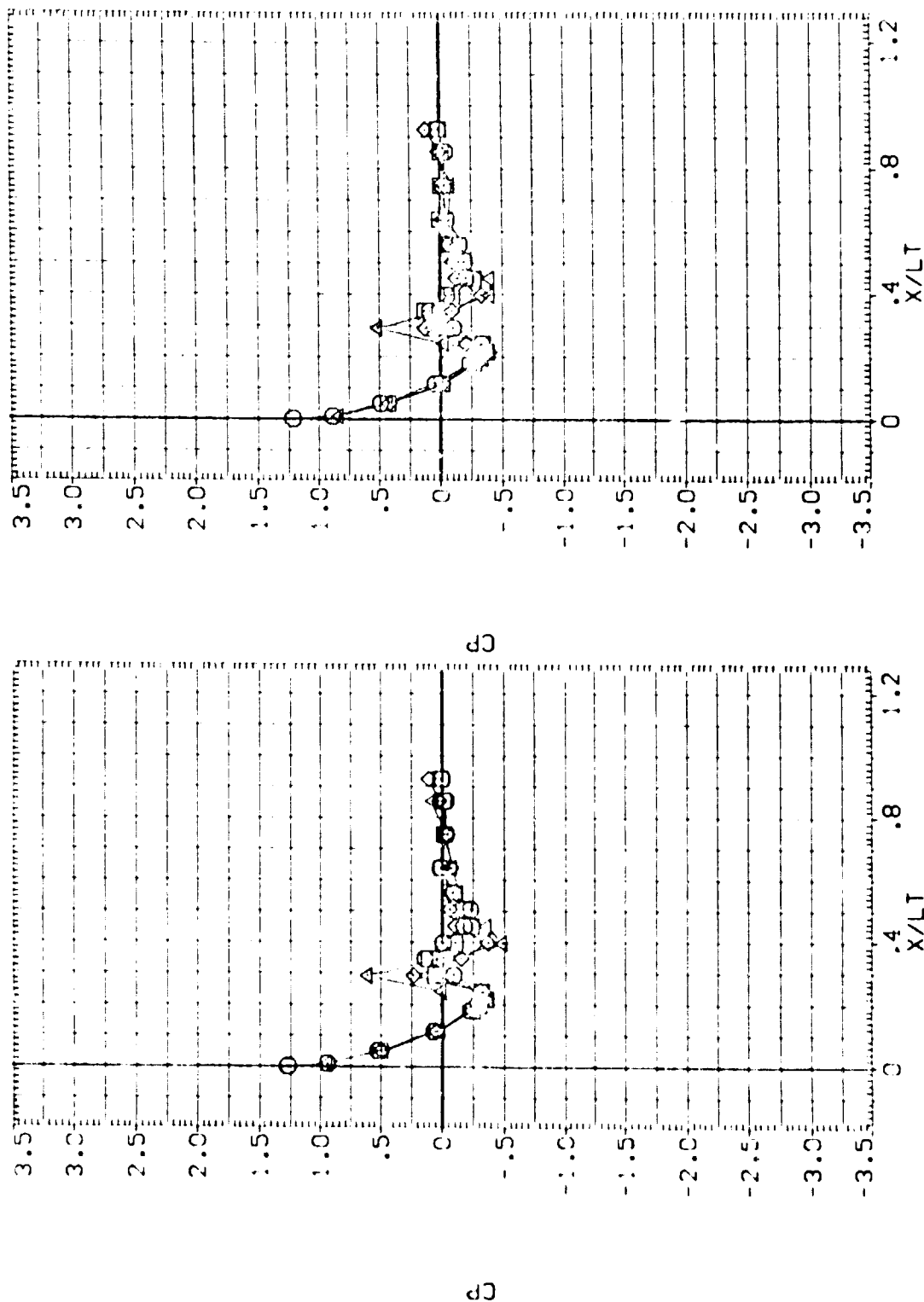
PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBRK
.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+1.2+S:2N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL	PHI	BETAS	ALPHAS	MACH	PARAMETRIC VALUES
()	.000	4.090	-4.200	RUDDER	1.250 ELEVON .000
◇	30.000	8.080			.000 SPOSRN .000
△	60.000				
▽	90.000				



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

APC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1133)

SYMBOL

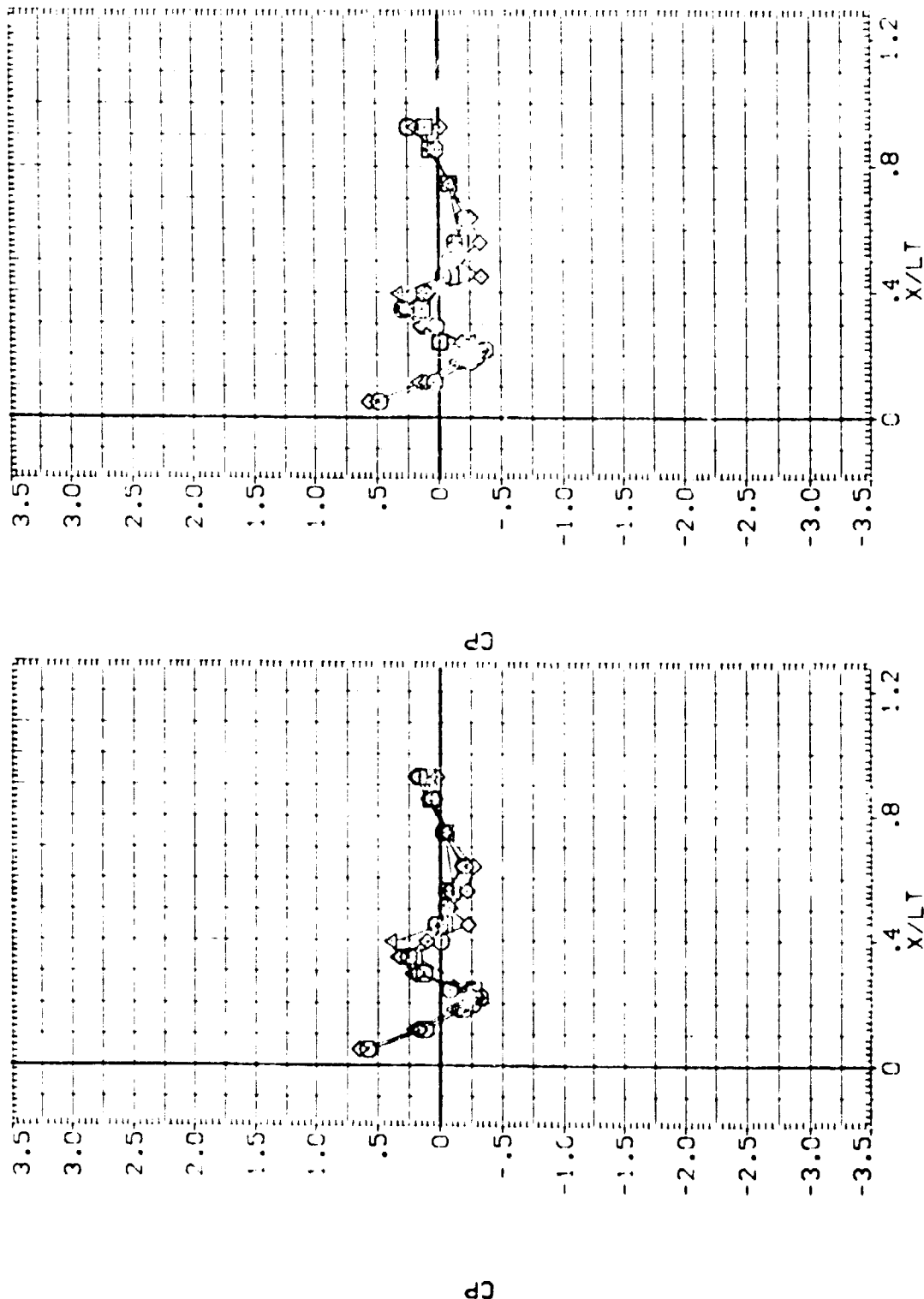
PHI
120.000
135.000
150.000
165.000

BETAC
4.090
8.080

ALPHA0
-4.200

PARAMETRIC VALUES

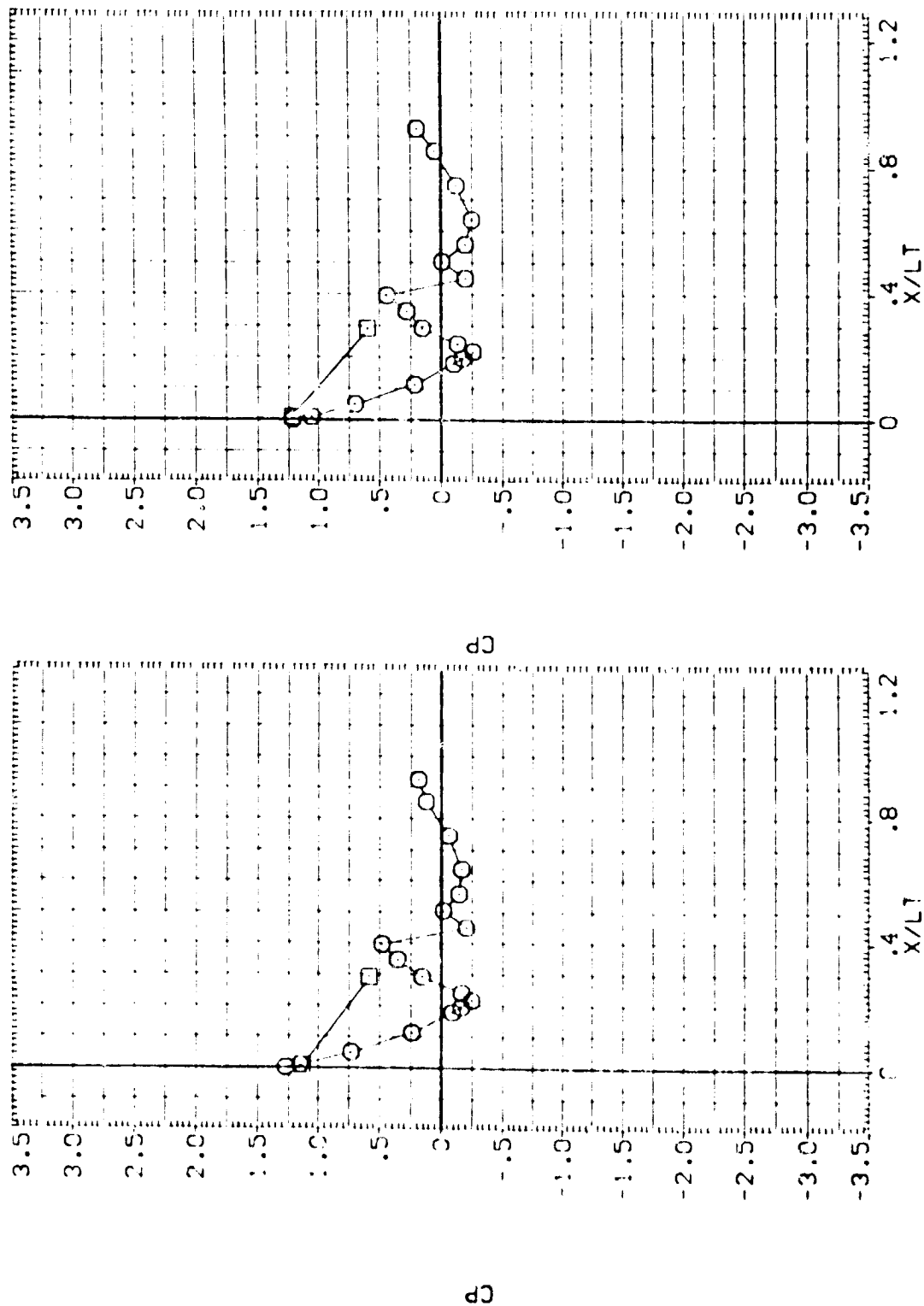
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12A25+AT10 EXTERNAL TANK (RB1T33)

SIMBOL	PARAM	BETAS	ALPHAS	PARAMETRIC VALUES	
180.000	180.000	4.090	-4.090	MACH	1.250
270.000	270.000	8.080	-8.080	RUDER	.000
				ELEVON	.000
				SP03PM	.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL

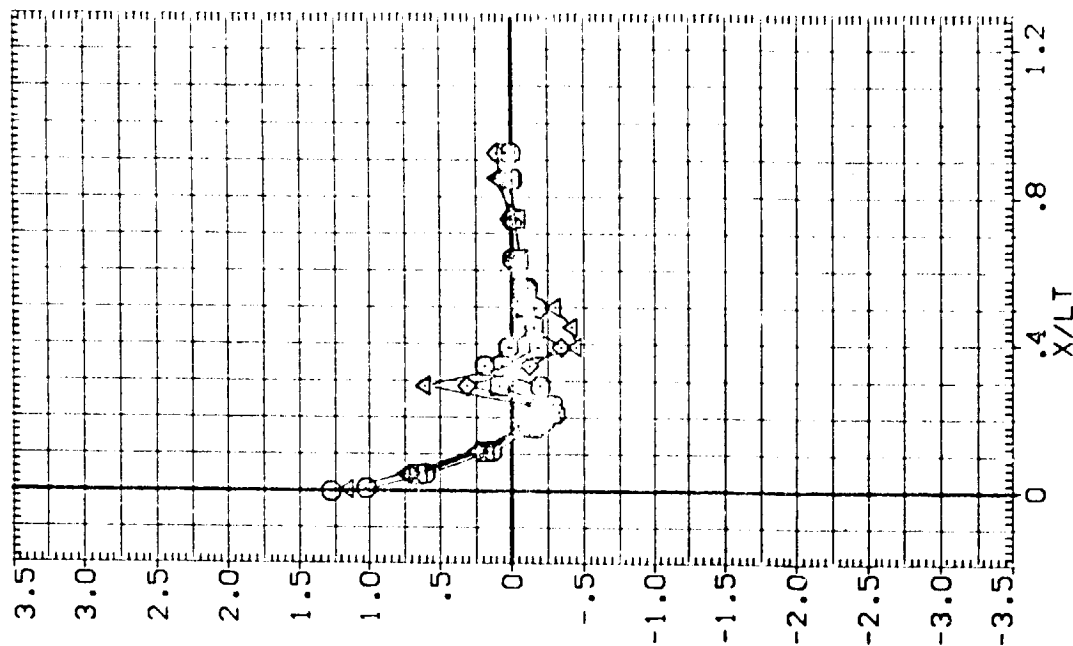
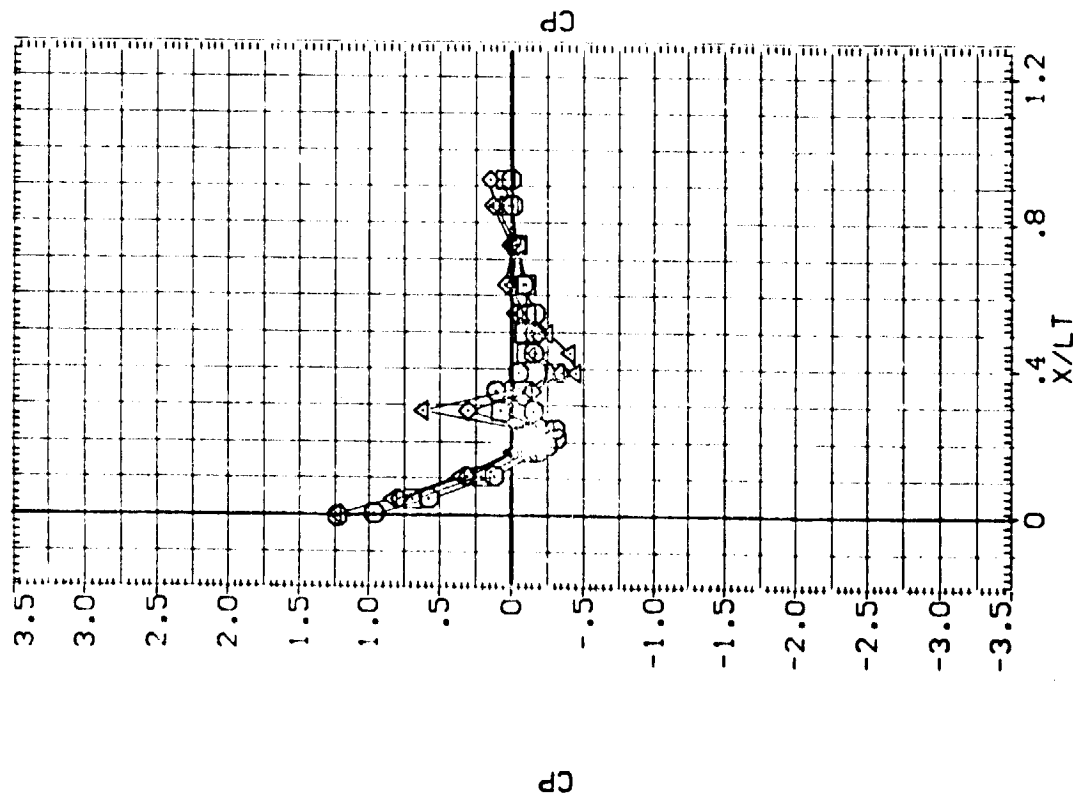
○ □ ◇ △

PHI .000
30.000
60.000
90.000

BETA0 -9.420
-4.140

ALPHA0 -7.730

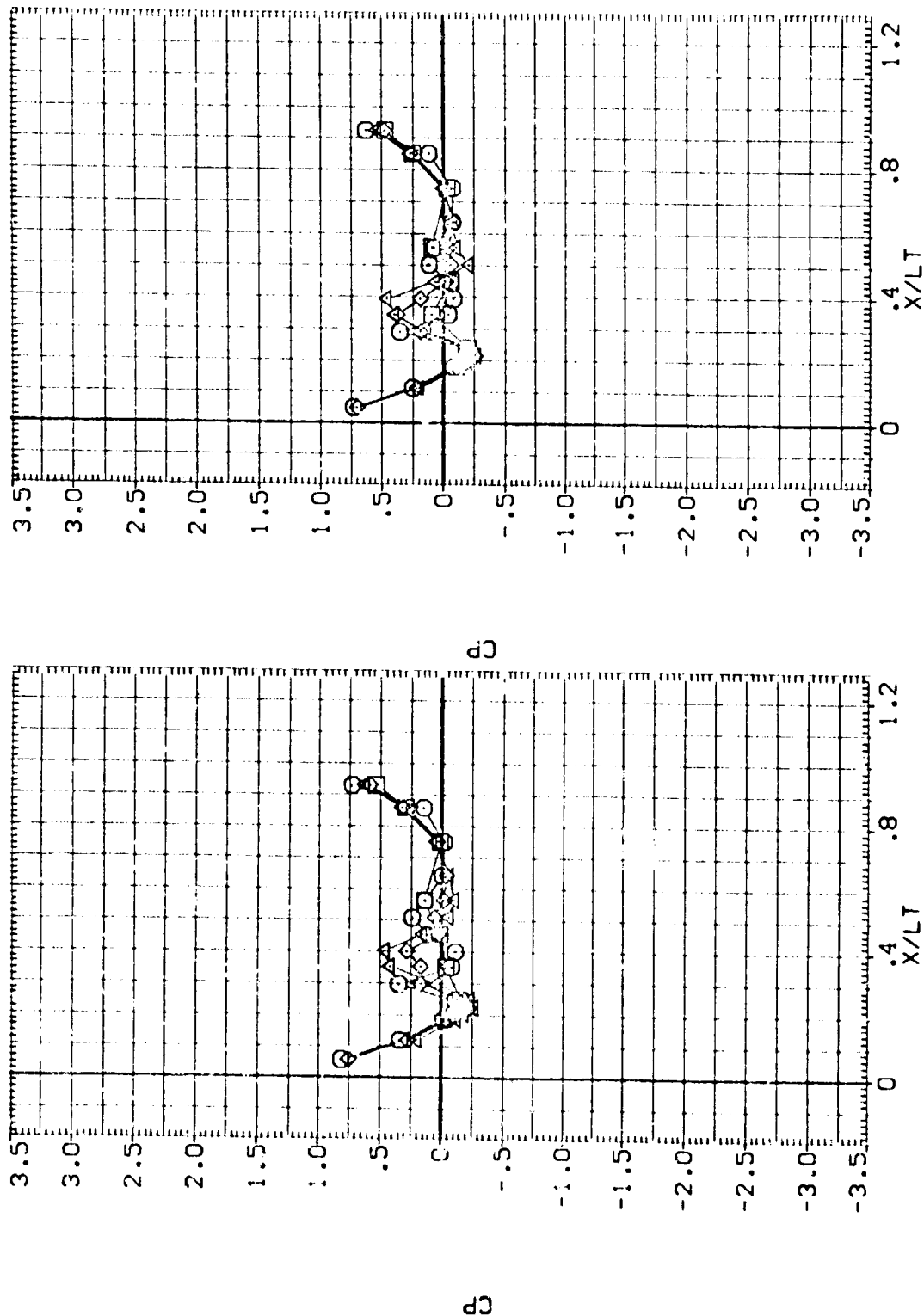
PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPOILER .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL	PHI	BETAG	ALPHA0	MACH	PARAMETRIC VALUES
○	120.000	-8.420	-7.30	RUDDER	1.250
□	135.000	-4.140			.000
◇	150.000				SPDRK
△	165.000				.000



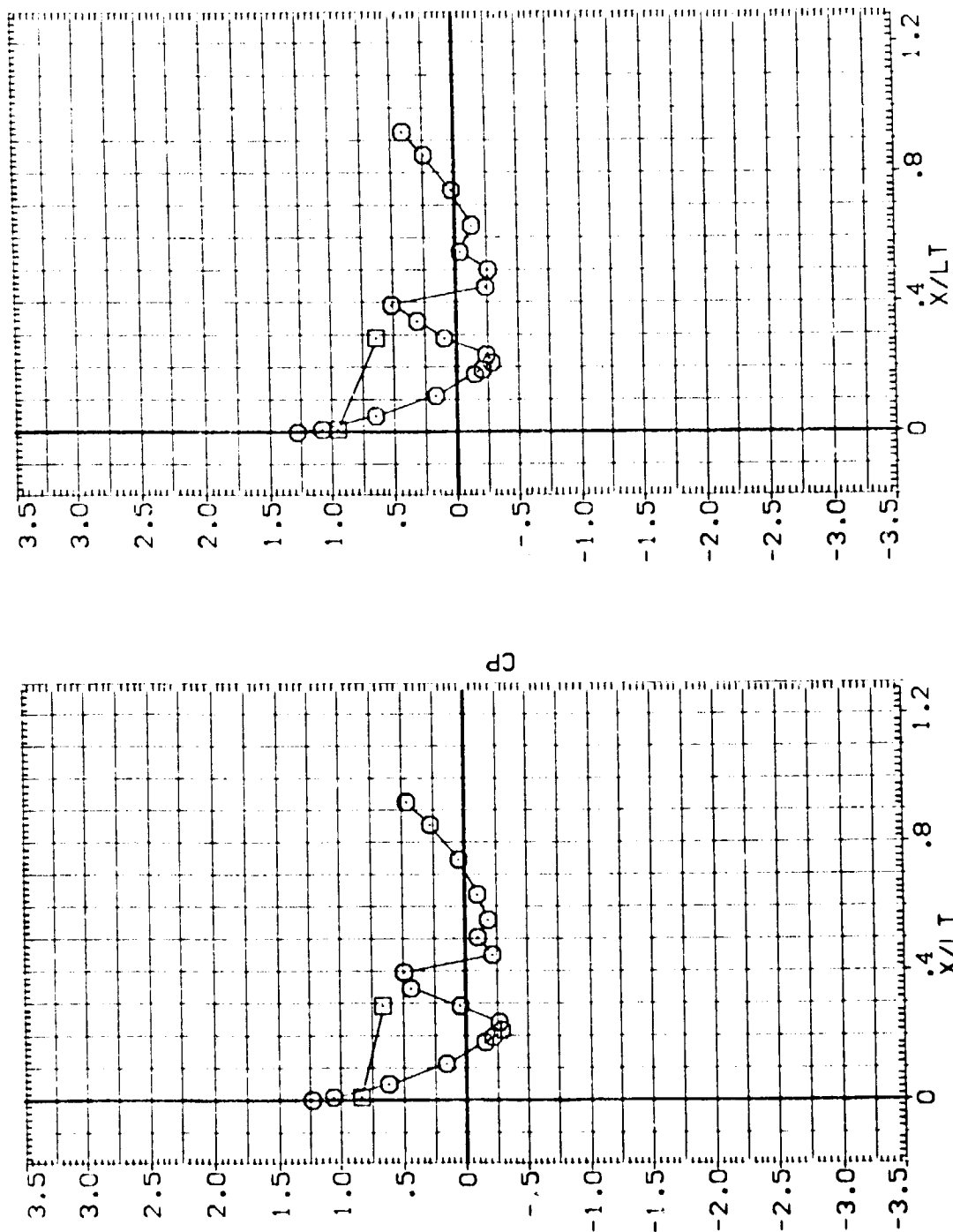
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL
○
□

PHI 180.000
270.000
BETA0 -8.420
-4.140
ALPHA0 -7.730

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .030
SPDRK .030



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL

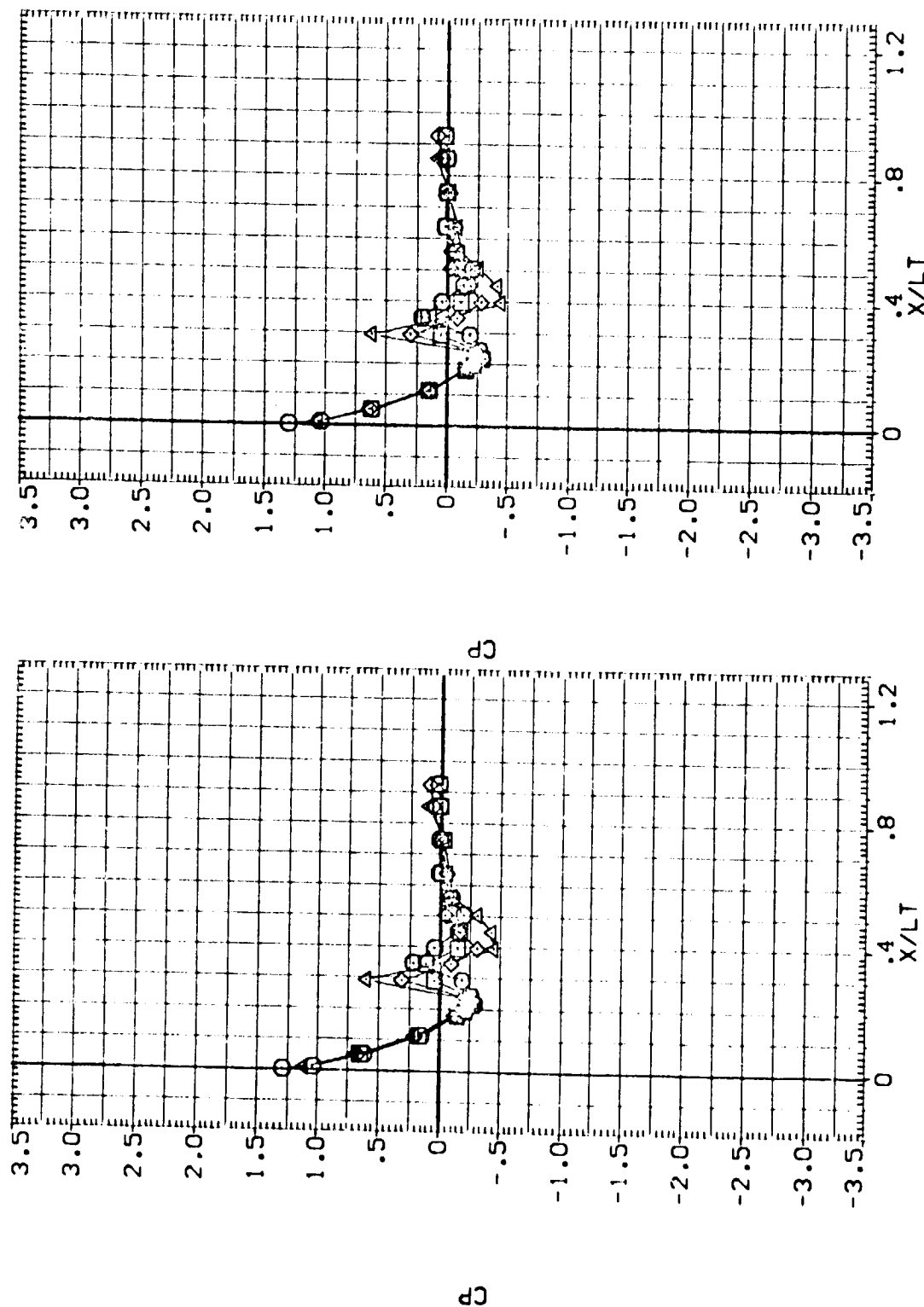
PHI
 .000
 30.000
 60.000
 90.000

BETA0
 -2.080
 .030

ALPHA0
 - 700

MACH
 RUDDER

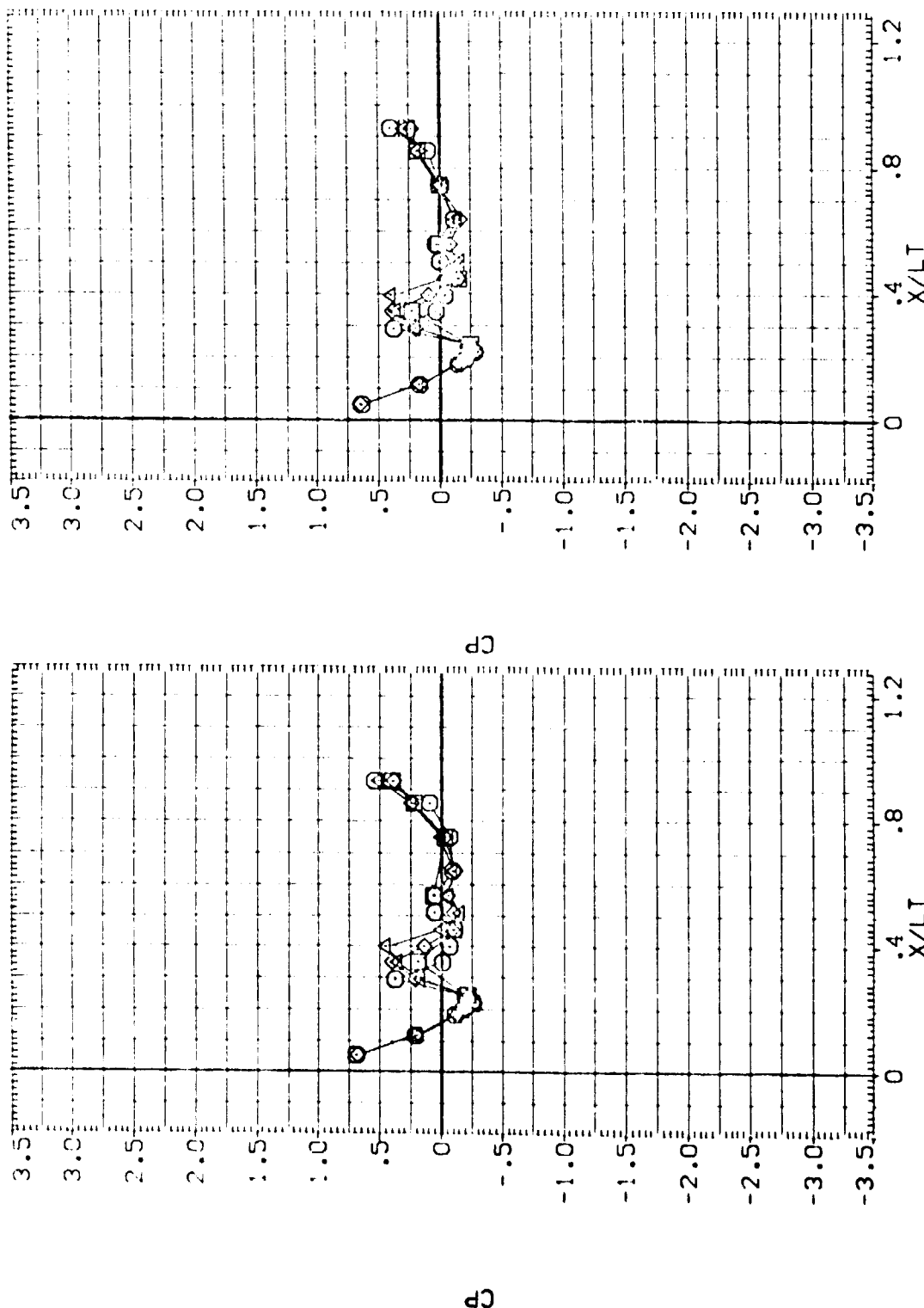
PARAMETRIC VALUES
 1.250
 .000
 ELEVON
 SPOBRK
 .000
 .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

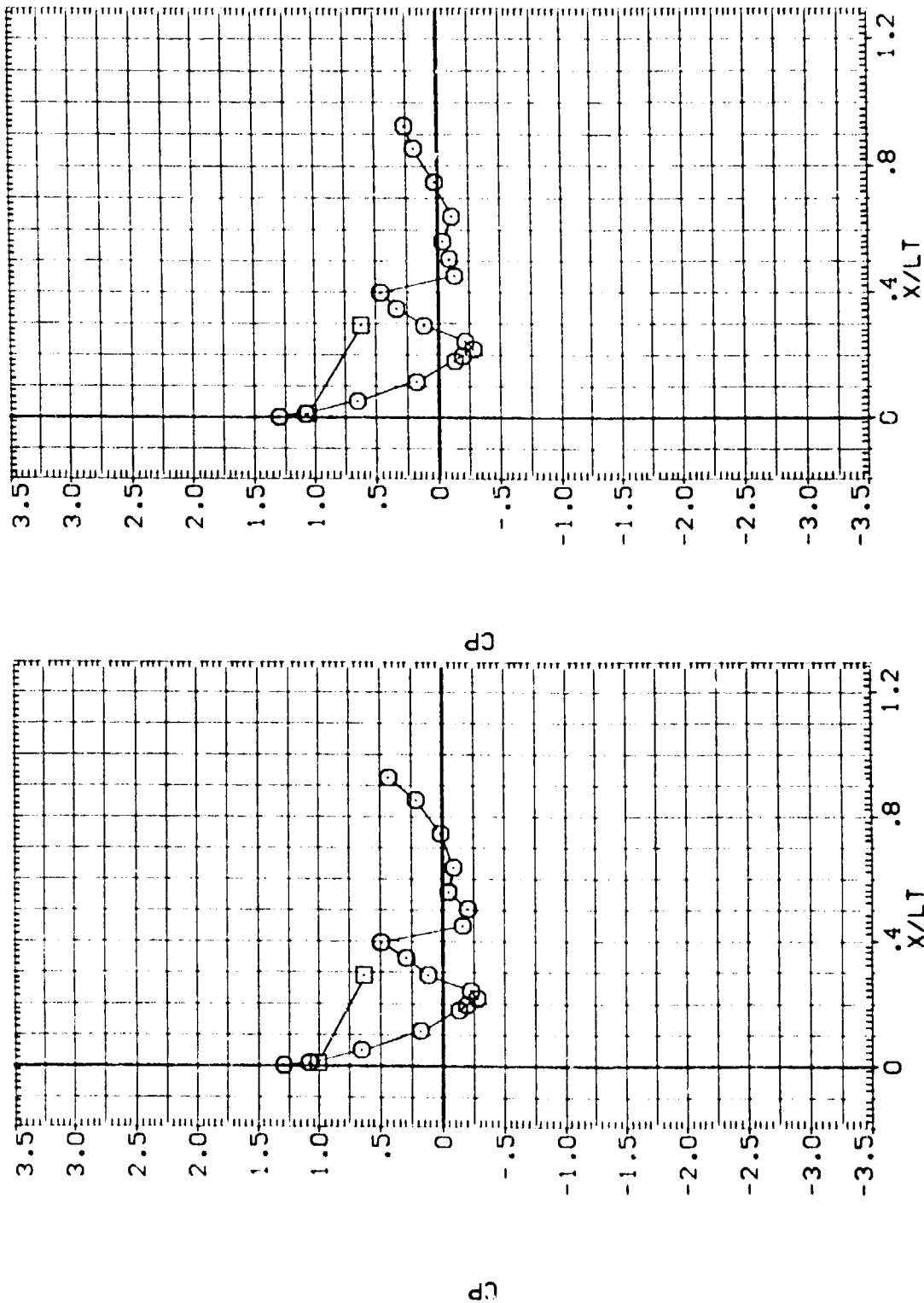
SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES	
○	120.000	-2.080	-7.00	MACH	1.250
○	135.000	.000		ELEVON	.000
◇	150.000			RUDDER	.000
△	165.000			SPC80X	.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

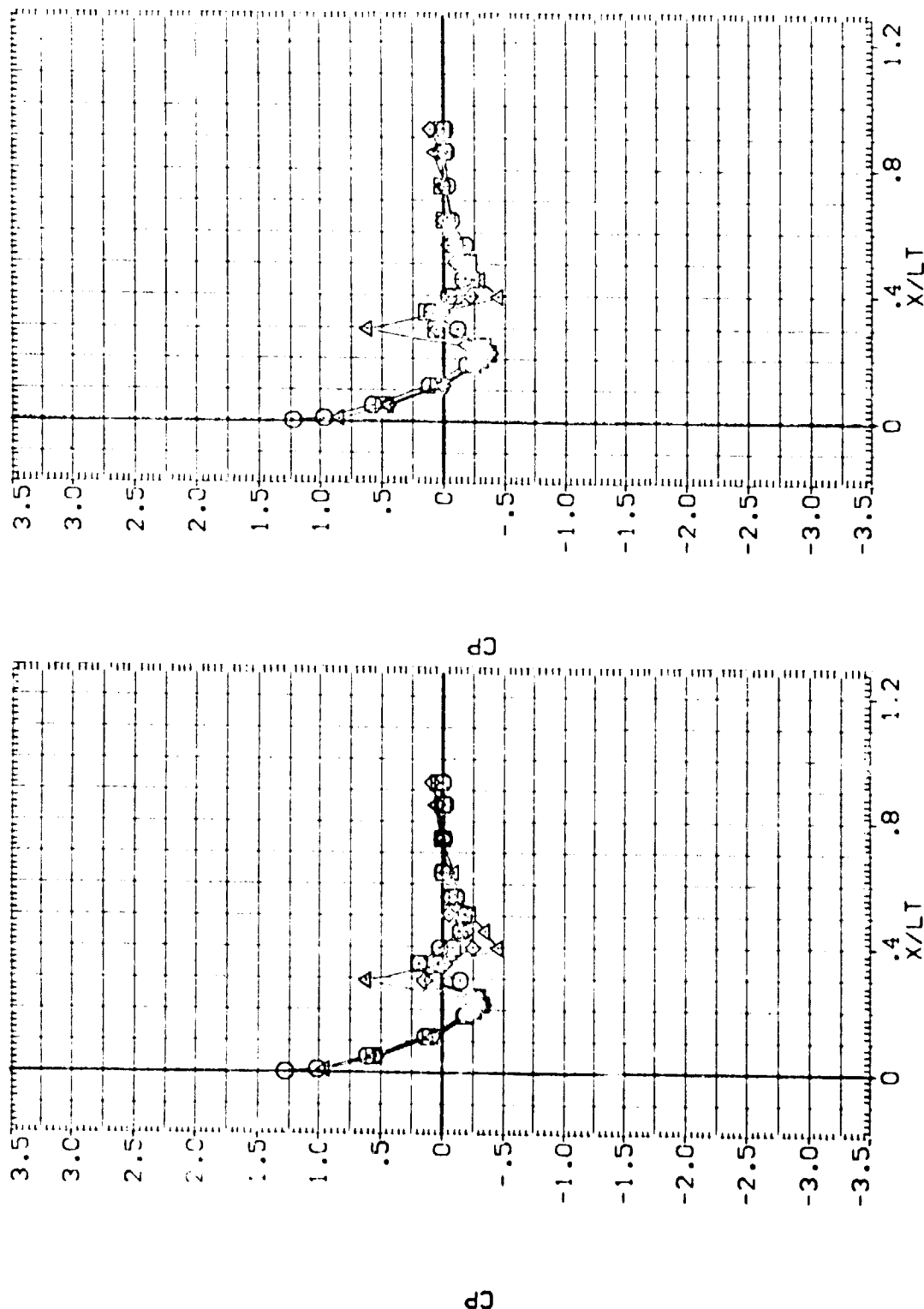
SYMBOL	PHI	BETA0	ALPHA0	MACH	ELEVON	SPDRK
10	180.000	-2.080	-700	1.250	.000	.000
	270.000	.030		.000		



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

PARAMETRIC VALUES
MACH 1.250 ELEVATION .000
RUDDER .000 SPEED .000

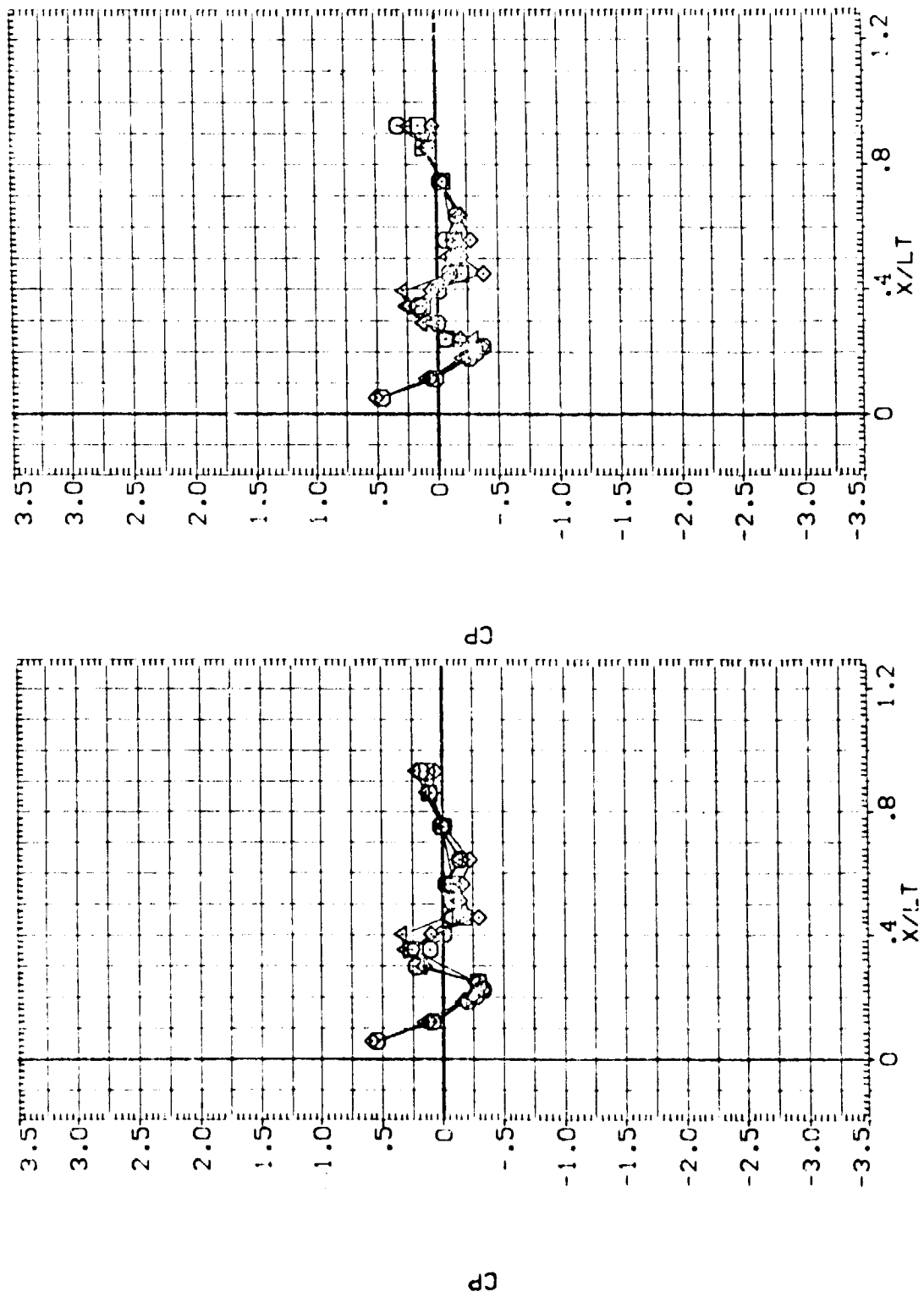
SYMBOL P41 BETA0 ALPHA0
O .000 4.270 -7.10
X 30.000 8.130
Y 60.000
Z 90.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:-7:6 IA14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1133)

SYMBOL	PHI	BETAC	ALPHA0	MACH	PARAMETRIC VALUES
○	120.000	4.270	-7.10	RUJTER	1.250
□	135.000	8.130			ELEVON
◇	150.000				SPDRK
△	165.000				



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

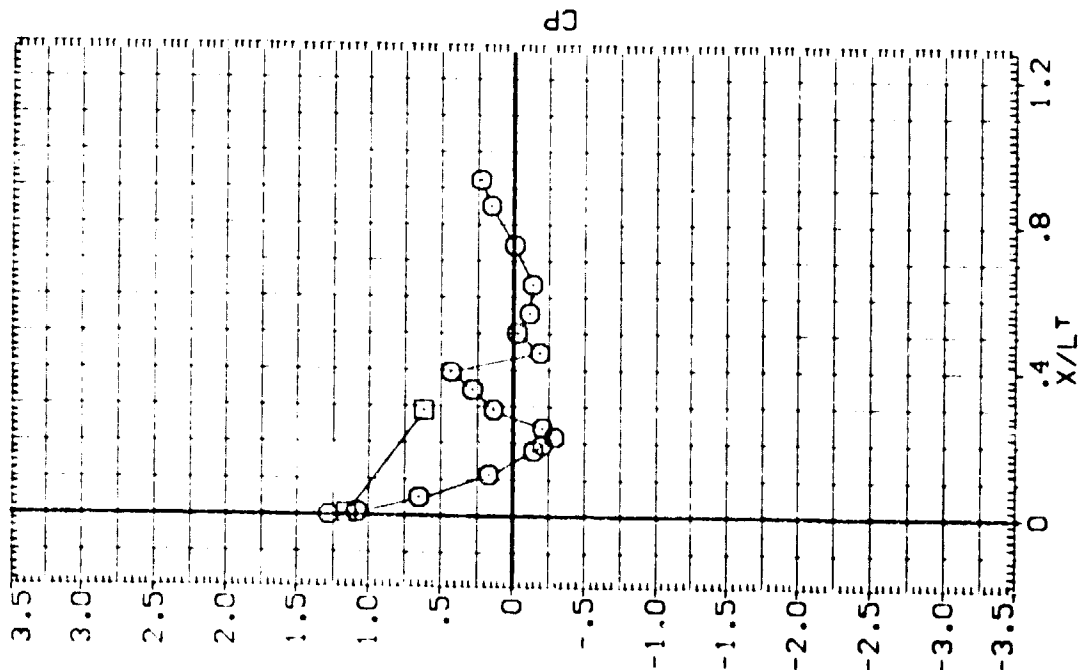
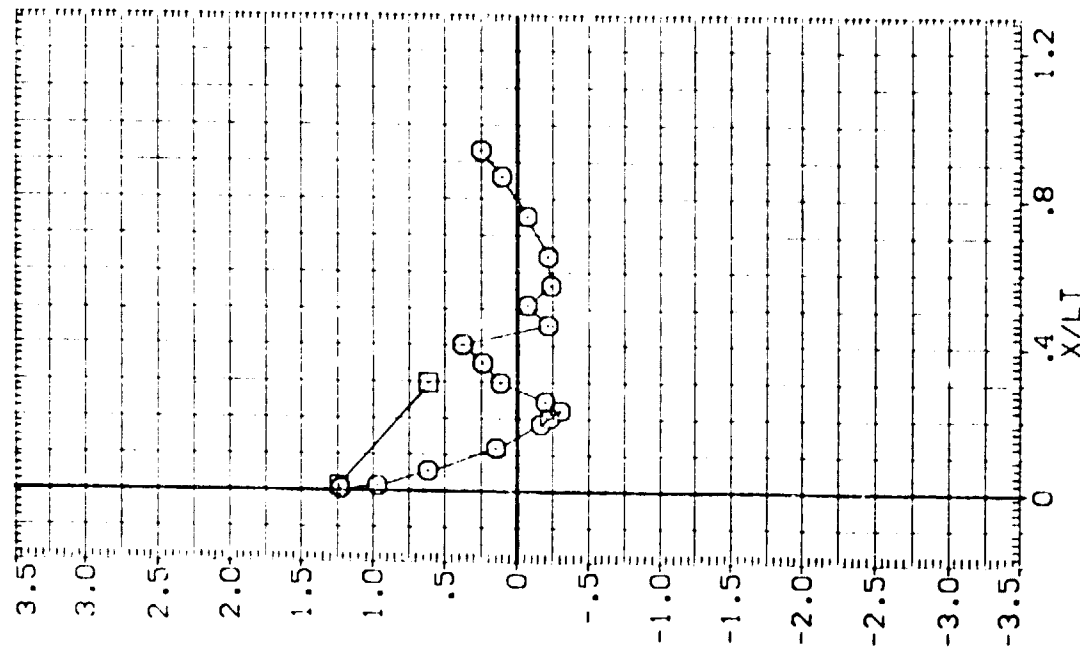
SYMBOL

PHI
180.000
270.000

BETAG
4.270
8.130

ALPHAG
-.710

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:1-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL
0 1 2 3 4

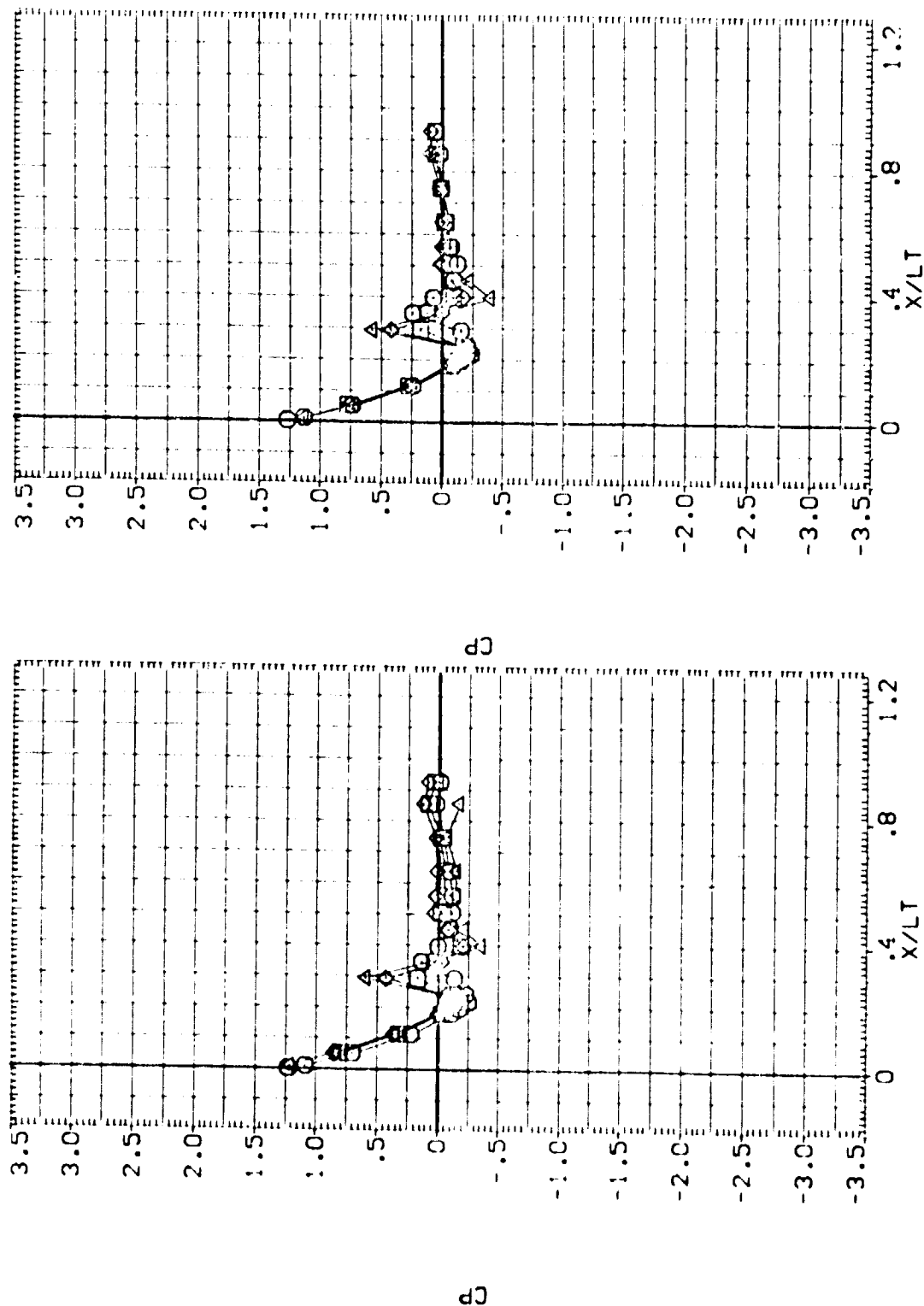
PHI .000
30.000
60.000
90.000

BETAC
-8.090
-3.970

ALPHA3
4.200

MACH
RUDDER

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOILER
.000



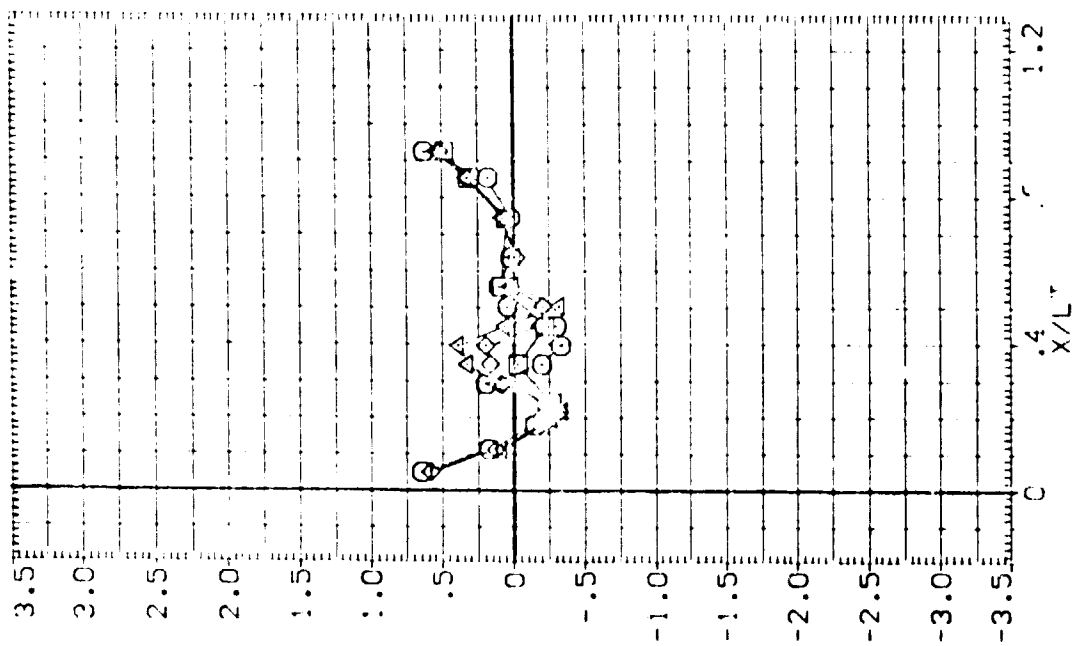
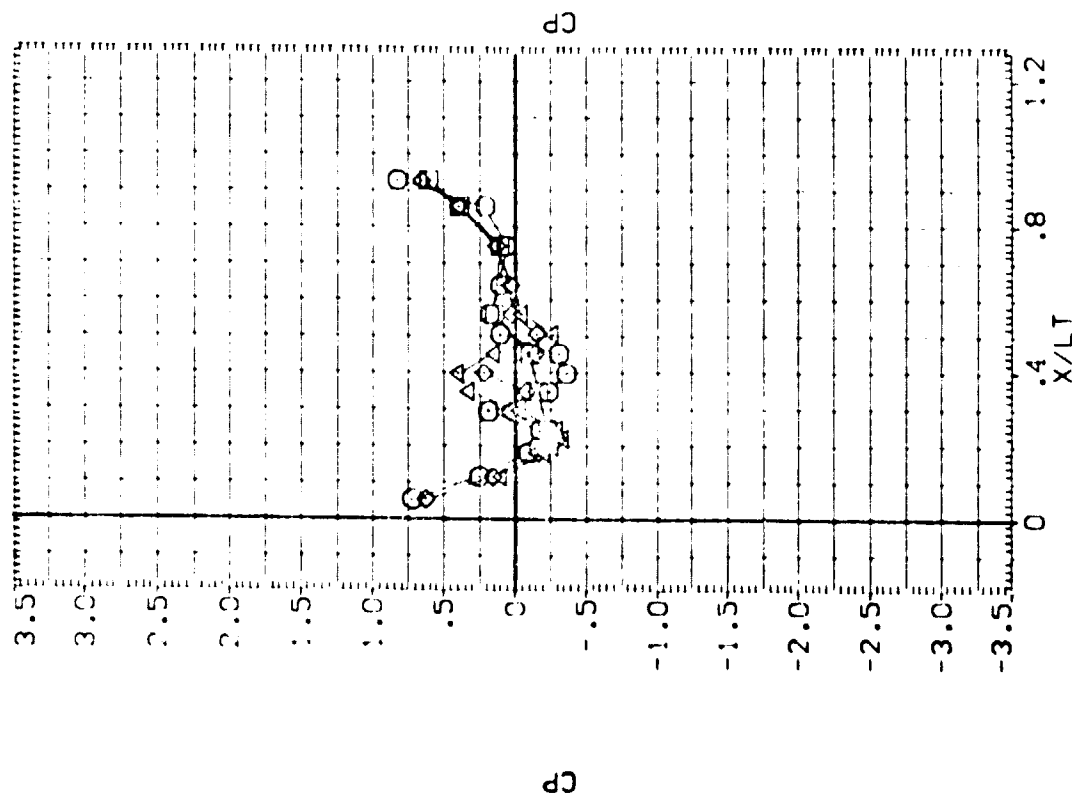
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 EXTERNAL TANK (RB1T33)

S+HBO

PHI BETA0 ALPHA0
 120.000 -8.090 4.200
 135.000 -3.970
 150.000
 165.000

PARAMETRIC VALUES
 MACH 1.250 ELEVCH .000
 RUDDER .000 SPEEDRK .000



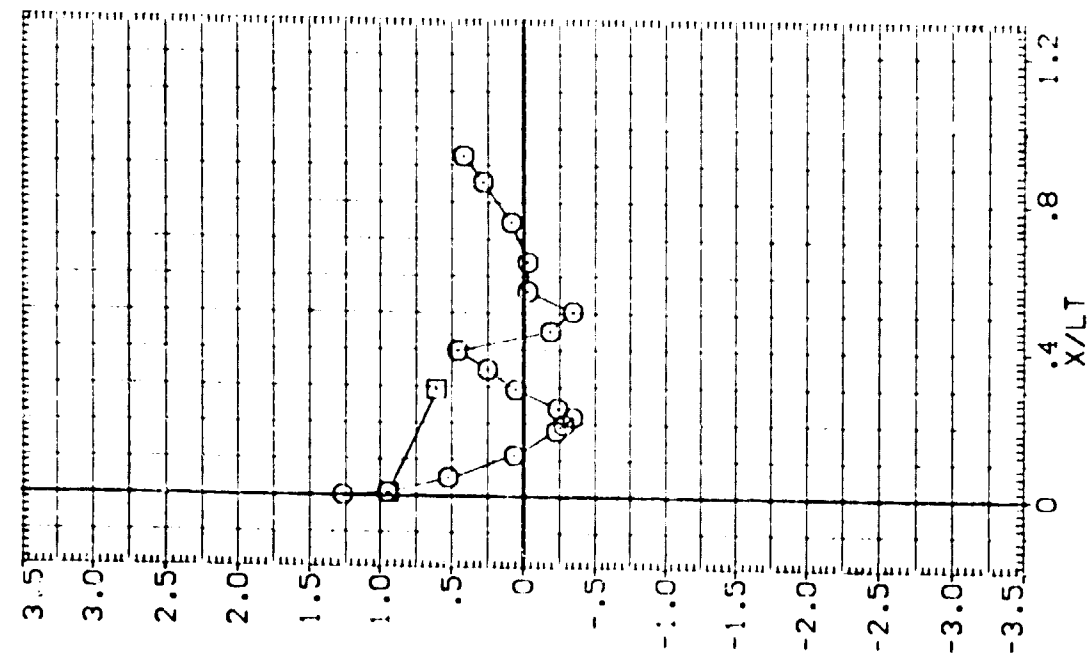
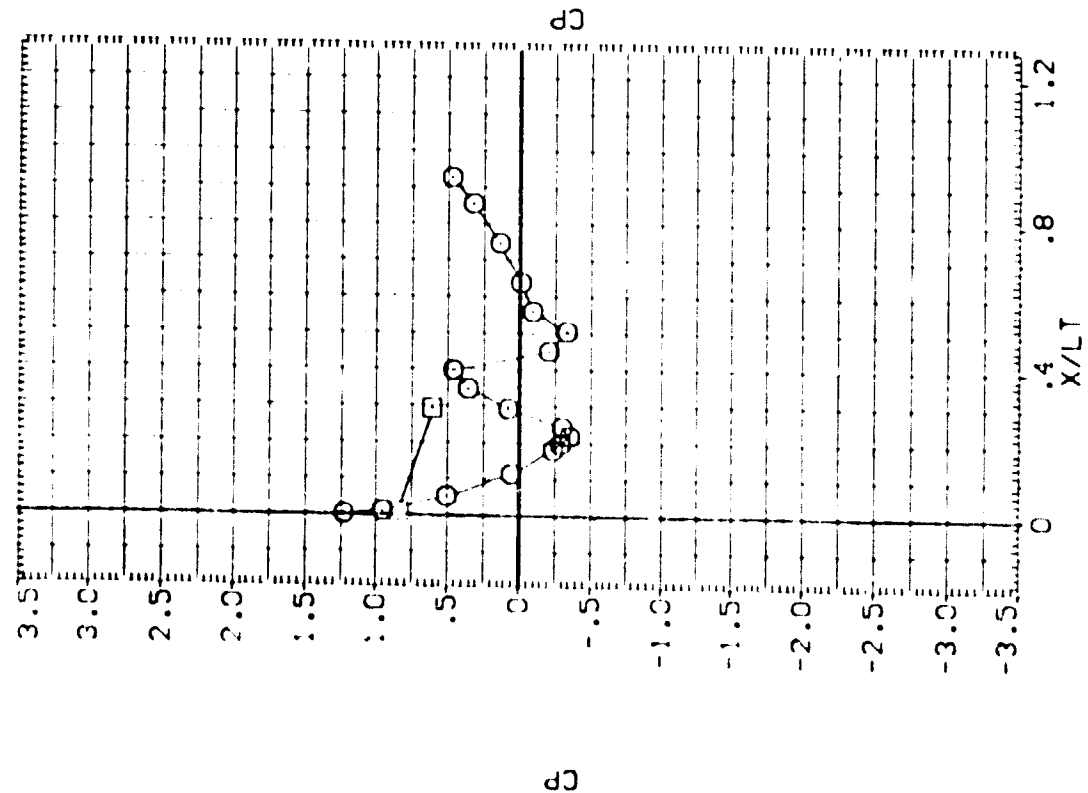
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:1-7:16 1A14 01+1:2+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL
 ()
 []

PA1 180.000
 270.000
 BETAC -8.09C
 -3.87C
 ALPHAC 4.200

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SP030X .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:1-716 1A14 01+112+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL

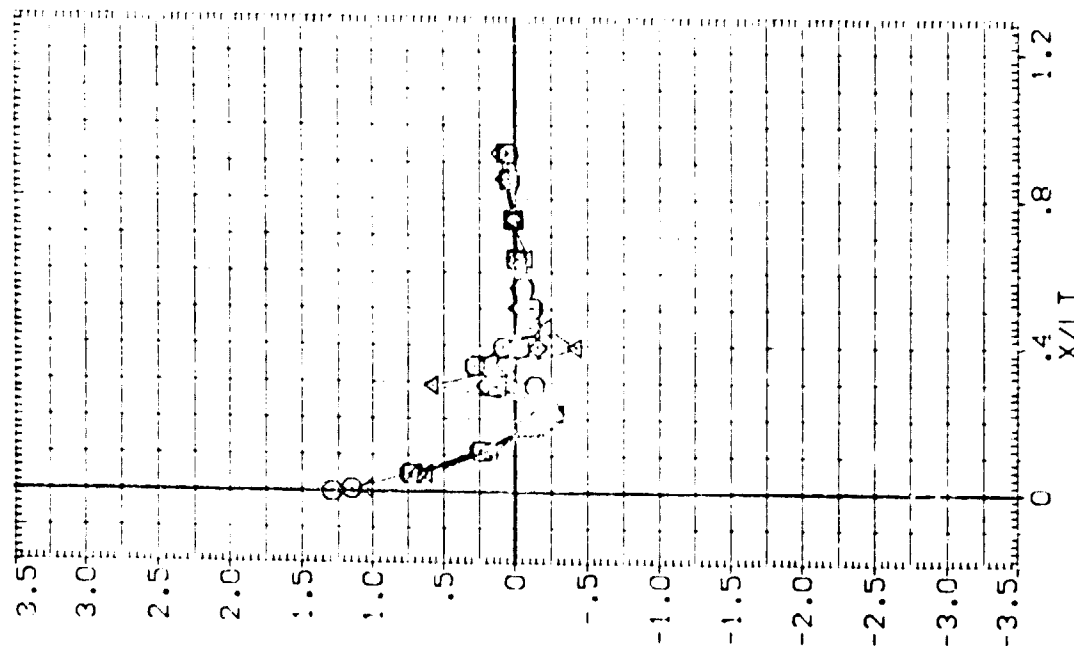
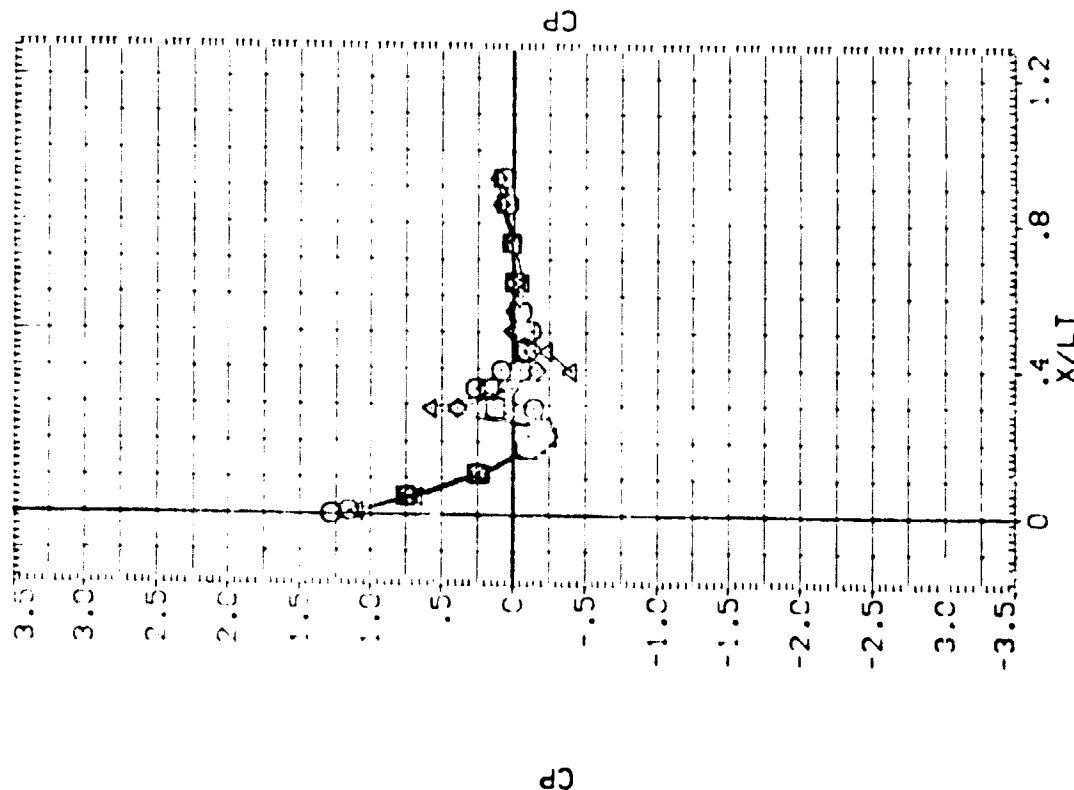
0
1
2
3

BETAC -2.000
ALPHA0 -1.220

MACH 1.000
RUDER 1.000
SPDRK 1.000

PARAMETRIC VALUE

ELEVCH 1.000
SPDRK 1.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+A110 EXTERNAL TANK (RB1T33)

SYMBOL
 ○ □ ◇ △

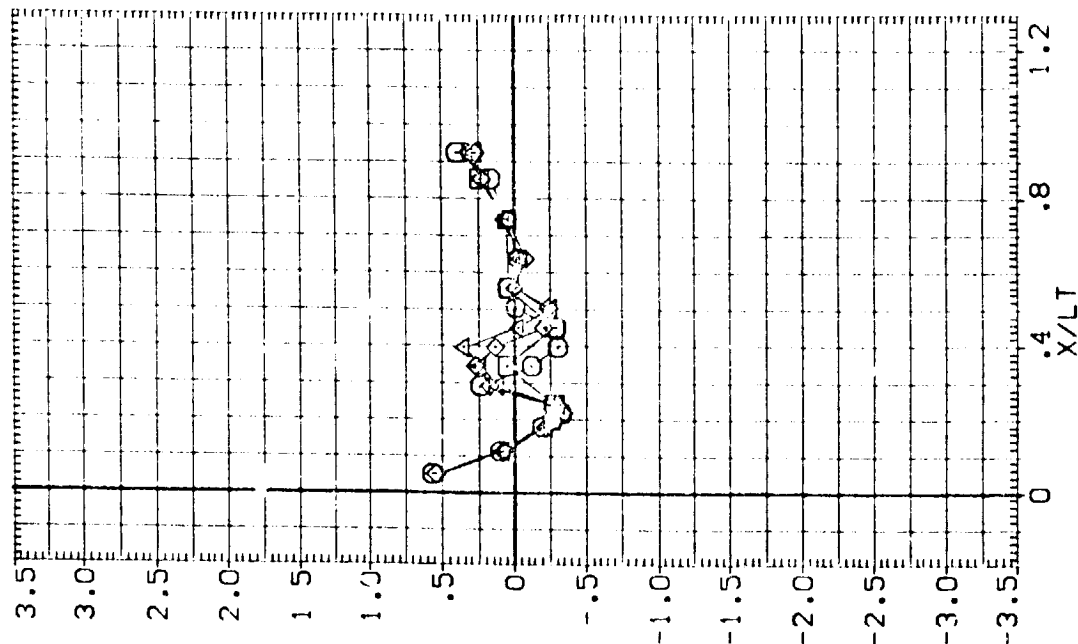
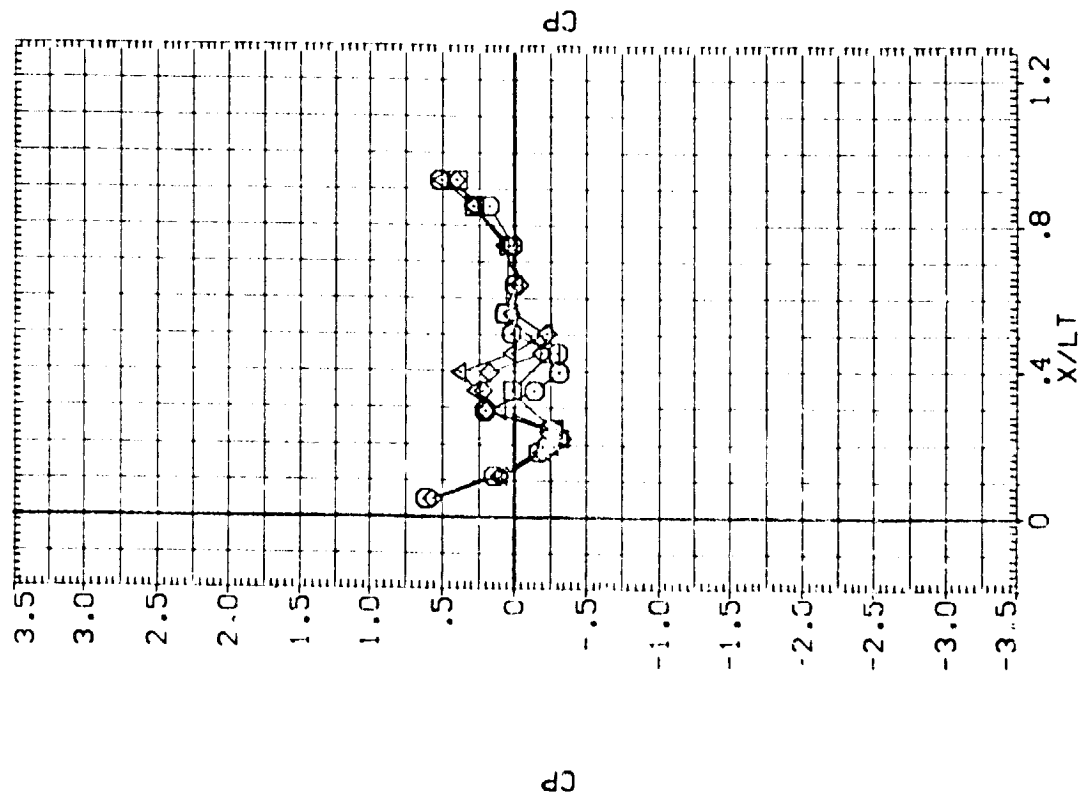
PHI
 120.000
 135.000
 150.000
 165.000

BETA0
 -2.000
 -0.070

ALPHA0
 4.220

MACH
 RUDDER

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPDBRK
 .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:1-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RBT33)

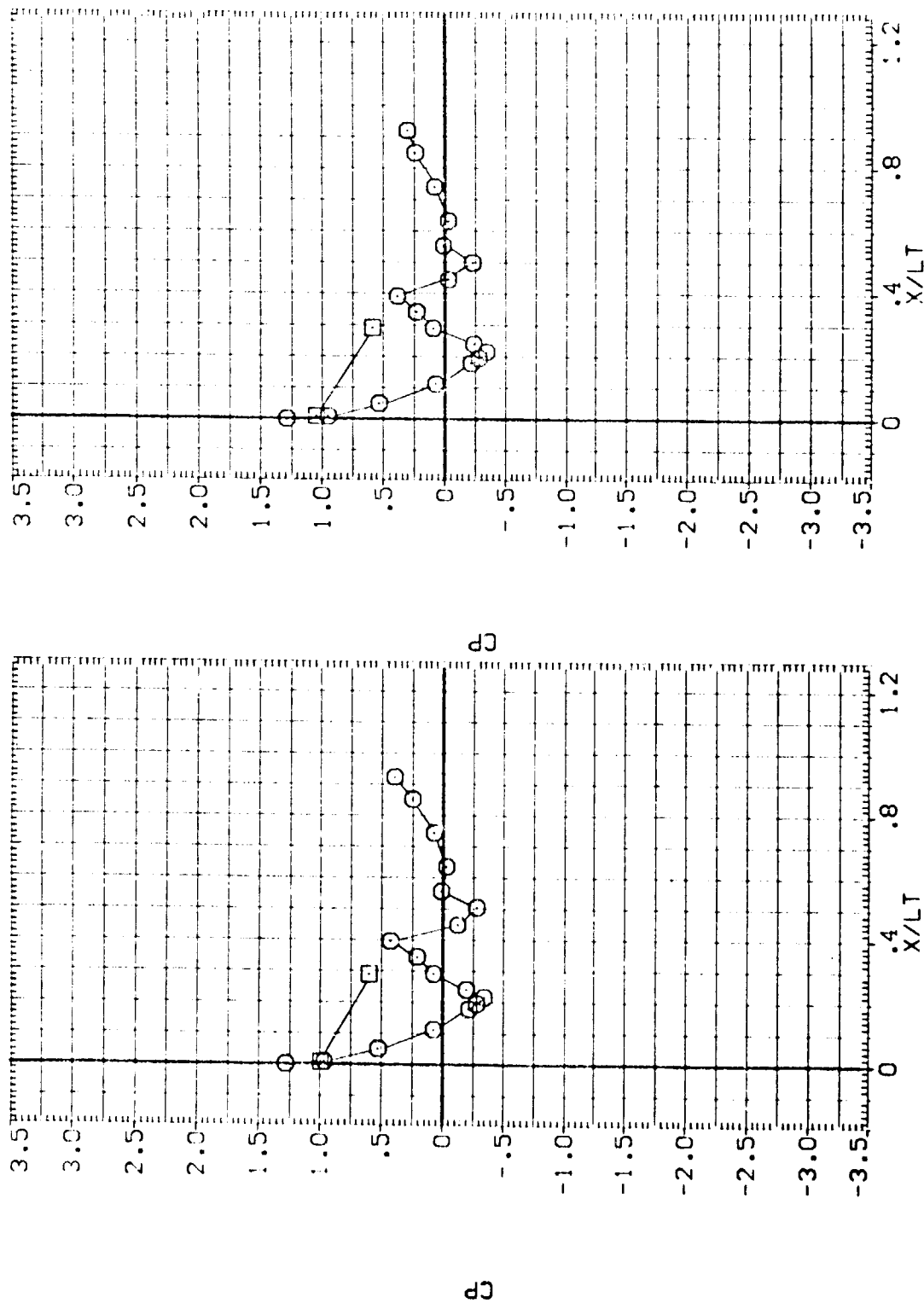
SYMBOL
O
□

P41 180.000
270.000

BETA0 -2.000
- .070

ALPHA0 4.220

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPDRX .000

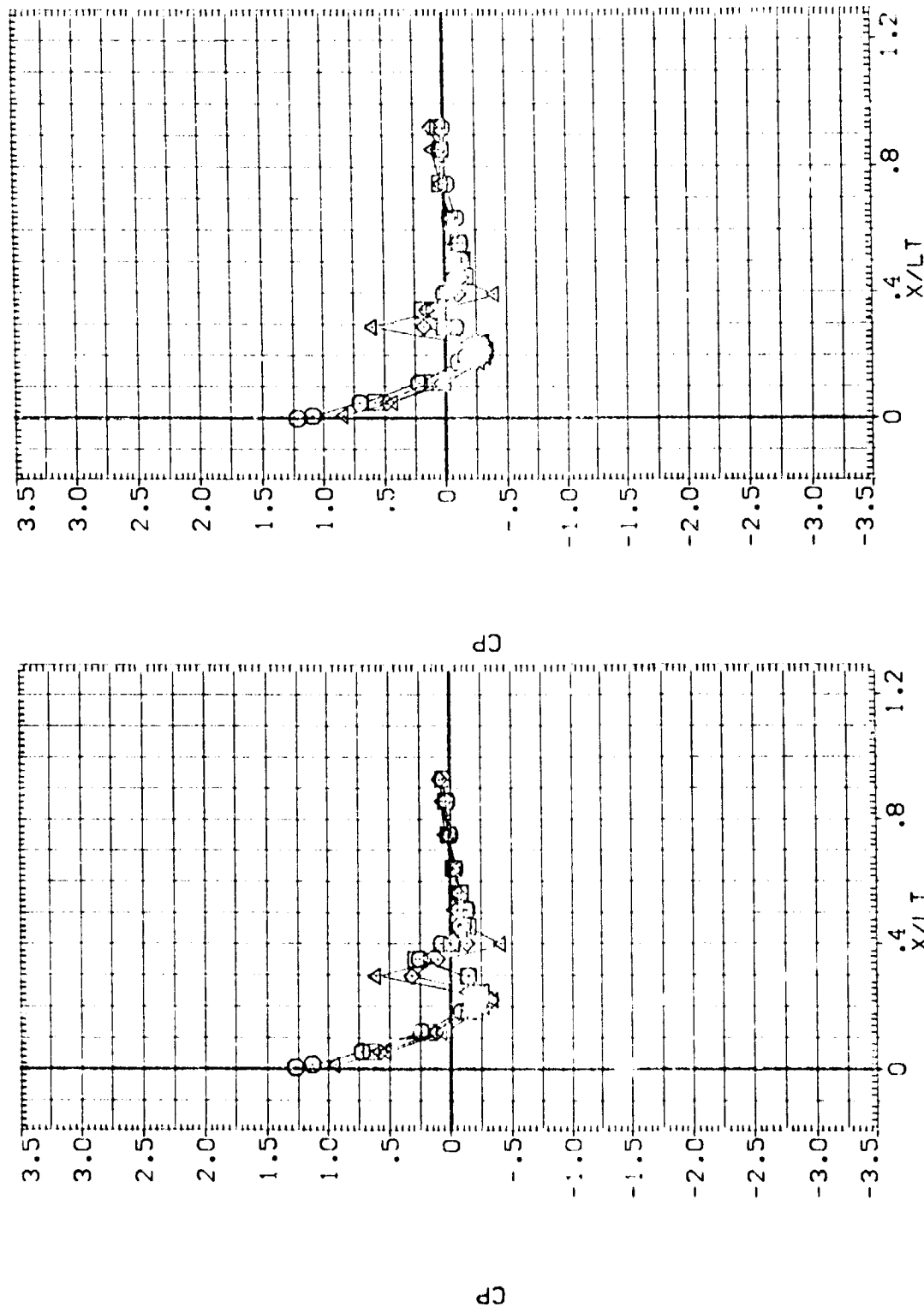


LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 JA14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOBRK .000

SYMBOL PHI BETA ALPHA
O .000 4.10C 4.430
X 30.000 8.15C
Y 60.000
Z 90.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1133)

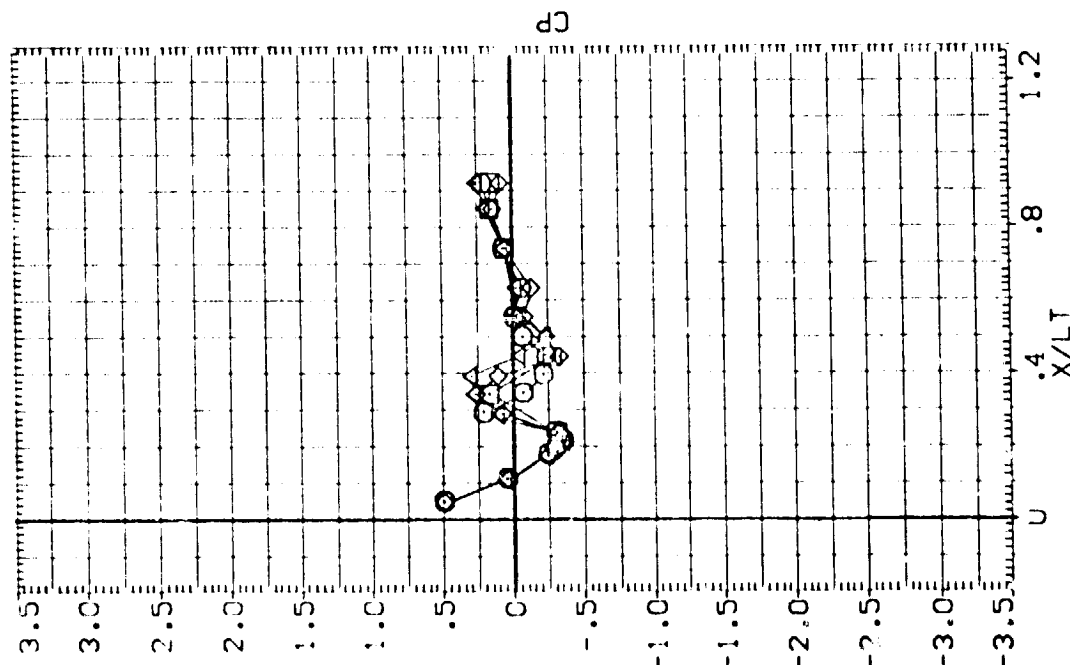
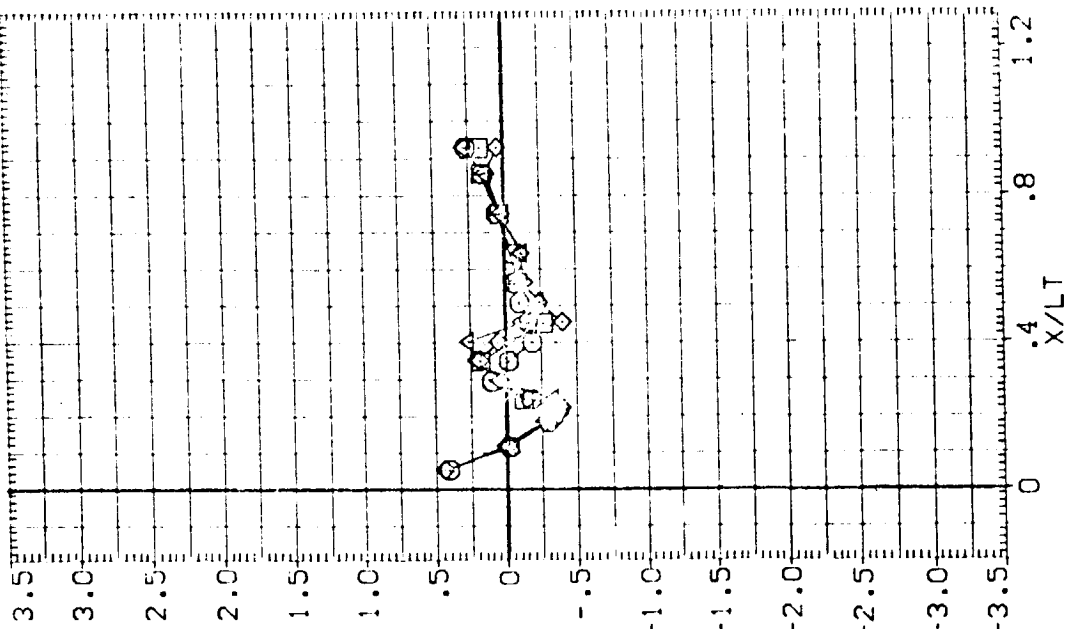
SYMBOL
 ○
 ◇
 △

PHI
 120.000
 135.000
 150.000
 165.000

BETA0
 4.100
 8.150

ALPHA0
 4.430

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-7:6 1A14 01-T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

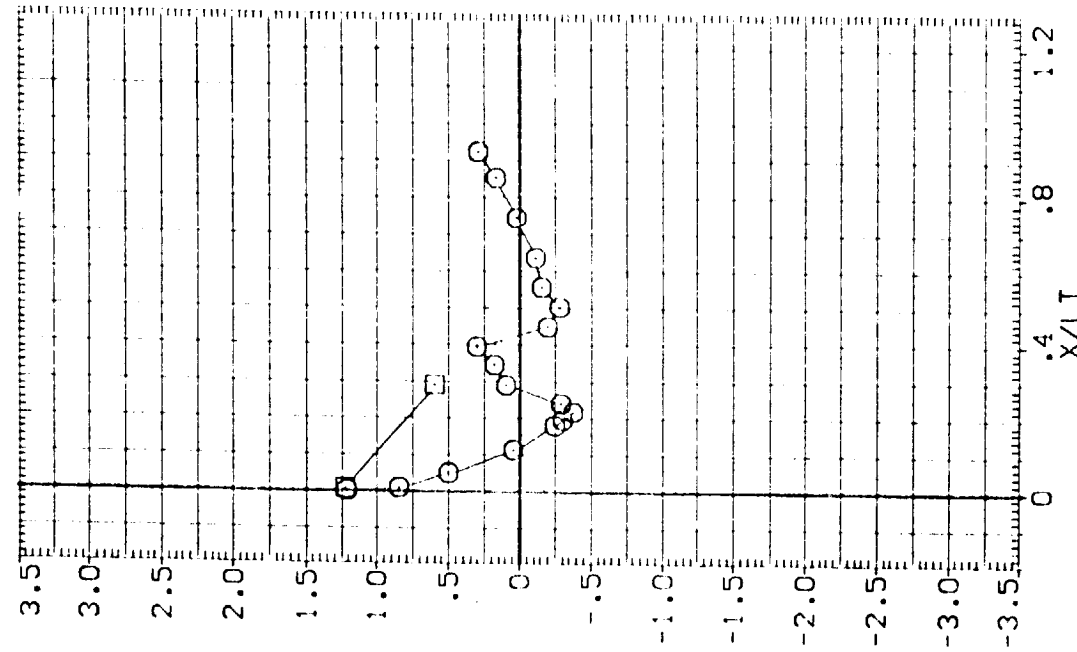
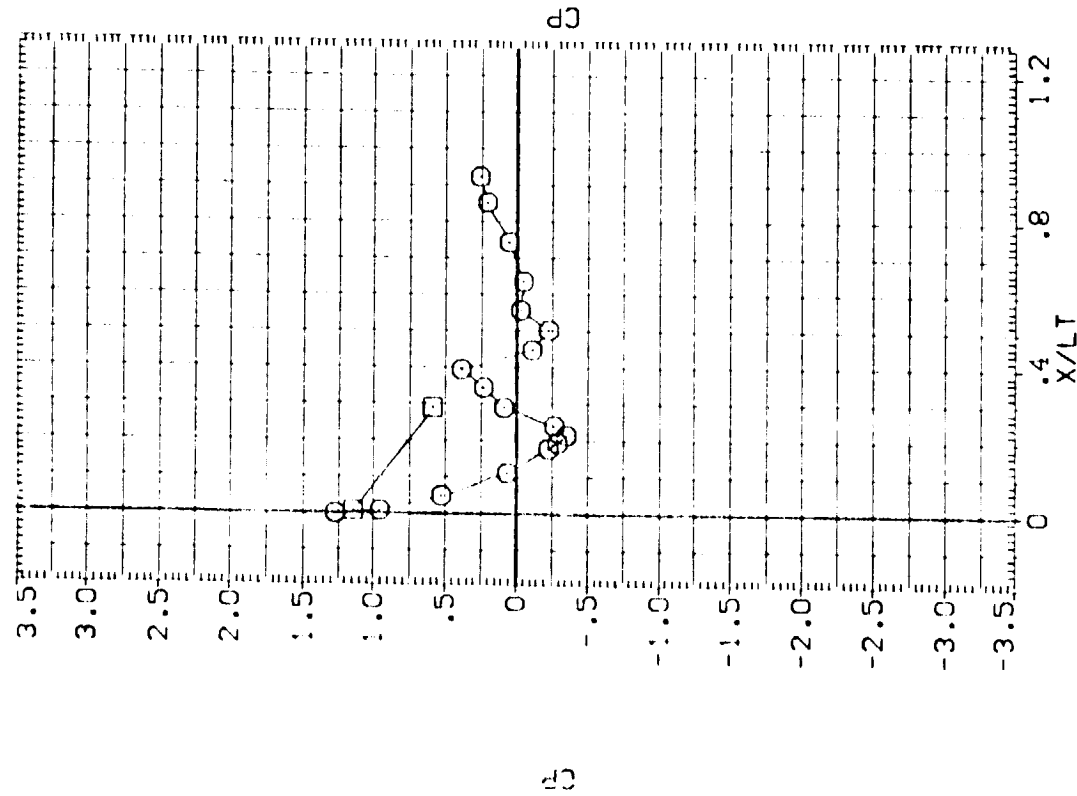
S1480
0
1

PHI 180.000
270.000

BETA2 4.100
8.150

ALPHA2 4.430

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL

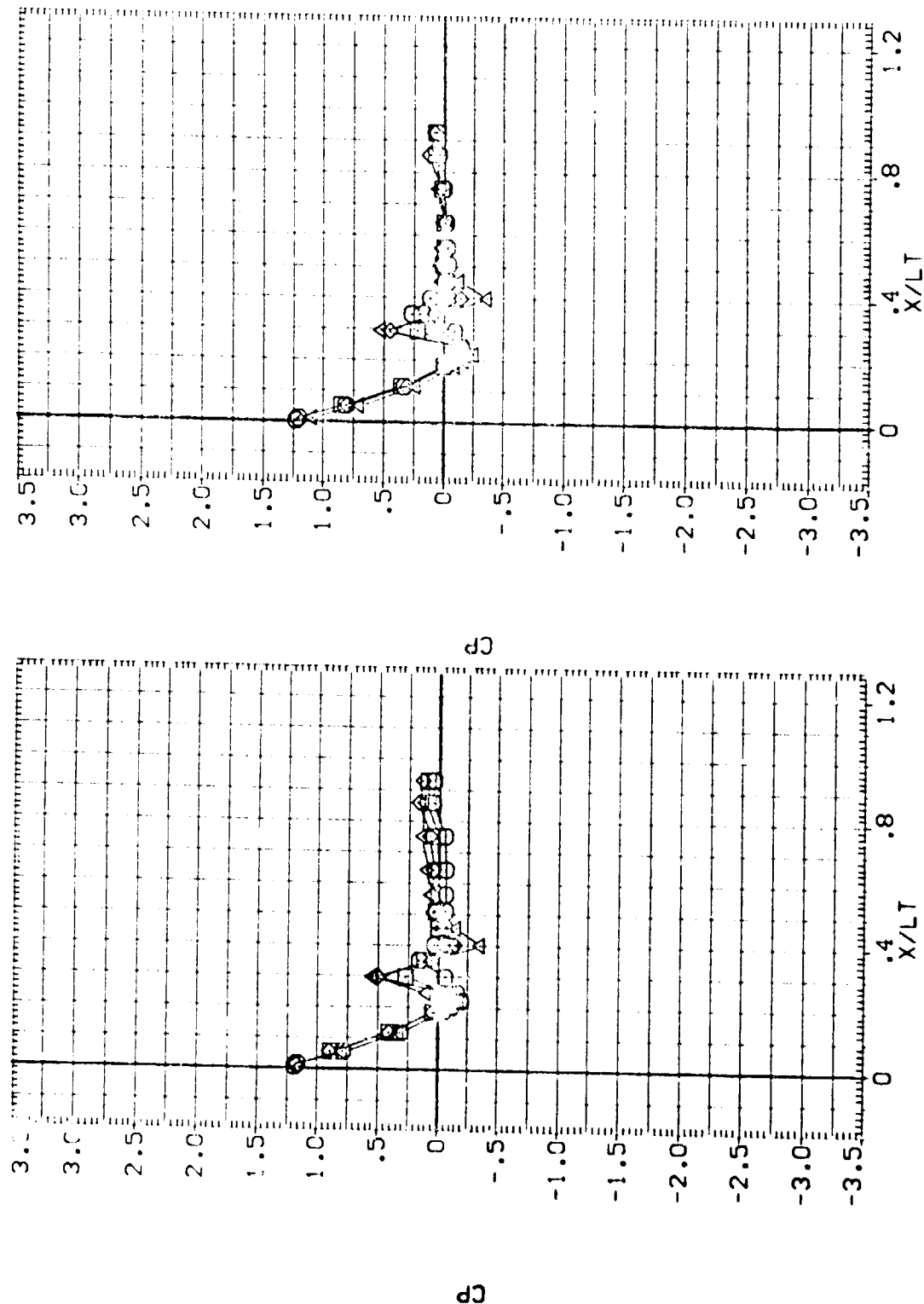
PHI
 .000
 30.000
 60.000
 90.000

BETA0
 -8.000
 -4.000

ALPHA0
 7.930

PARAMETRIC VALUES

MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC::7:6 I:14 Q1+I:2+S:2N25+AT10 EXTERNAL TANK (RBT133)

70845

15

120.000
135.000
150.000
165.000

120.000
135.000

120.000
135.000

120.000
135.000

BETAS ALPHAS

ALPHA

-8.030
-4.000

-8.030
-4.000

MACH
RUDDER

MACH
RUDDER

PARAMETRIC VALUES

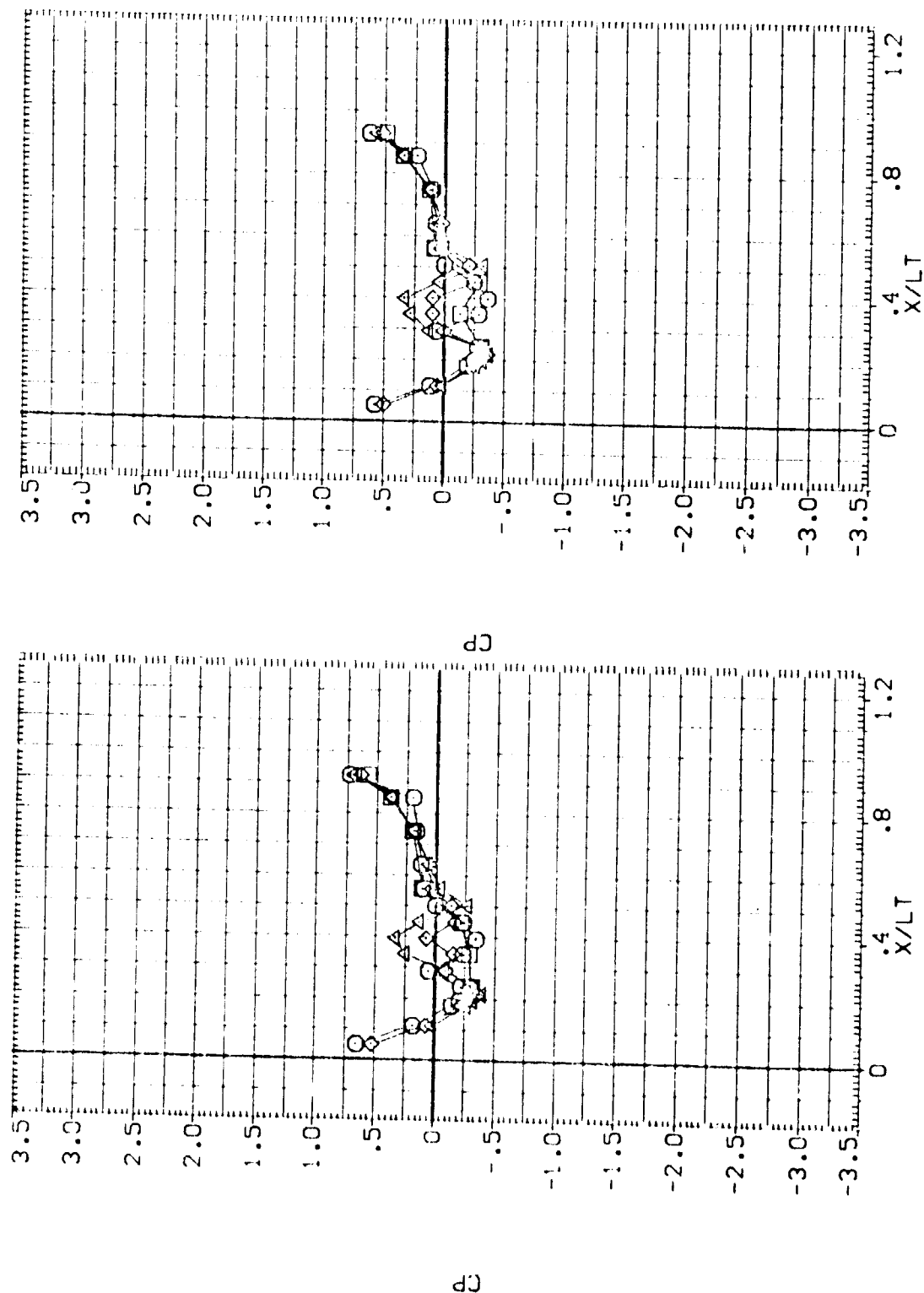
0.80
0.25

2013

000.

WHEELS
ELEVATOR

000.



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

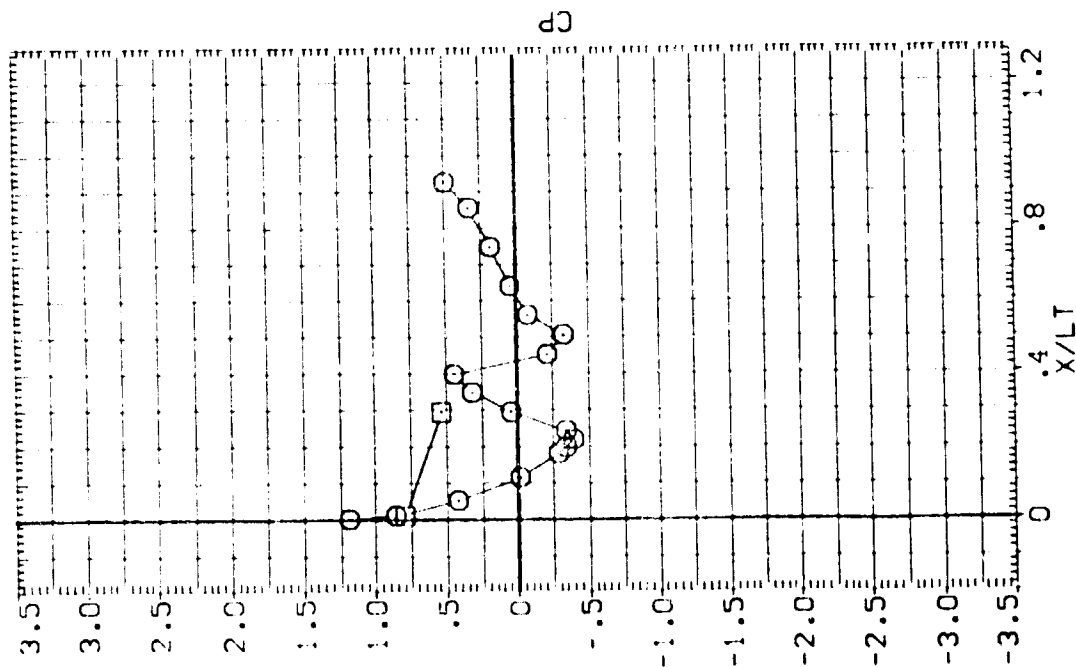
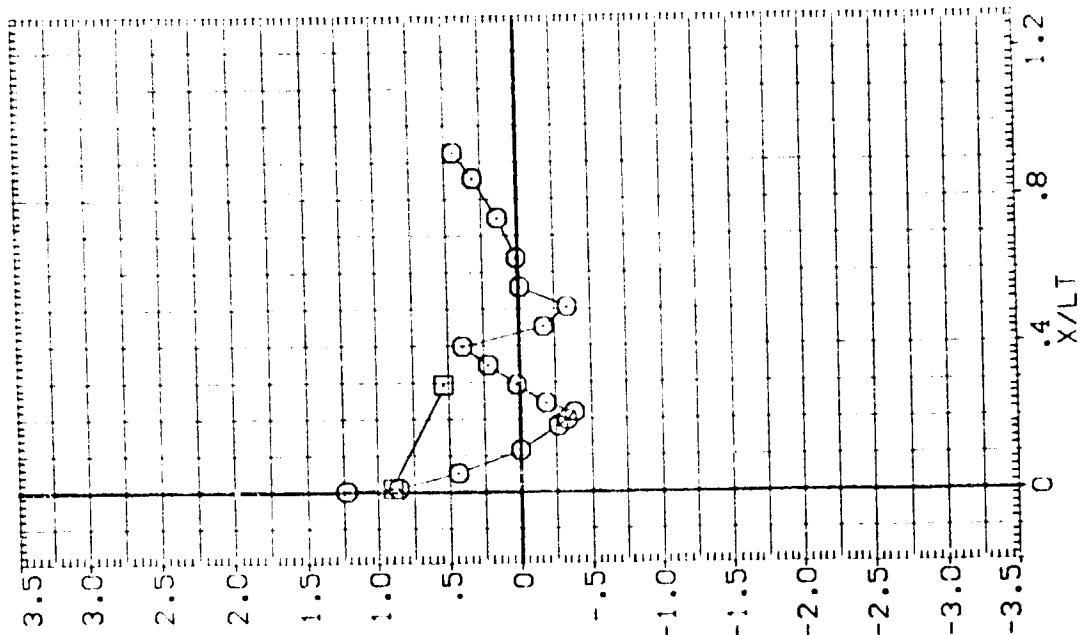
SYMBOL
O

PHI 180.000
270.000

BETA0 -8.030
-4.000

ALPHA0 7.930

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SP039M .000

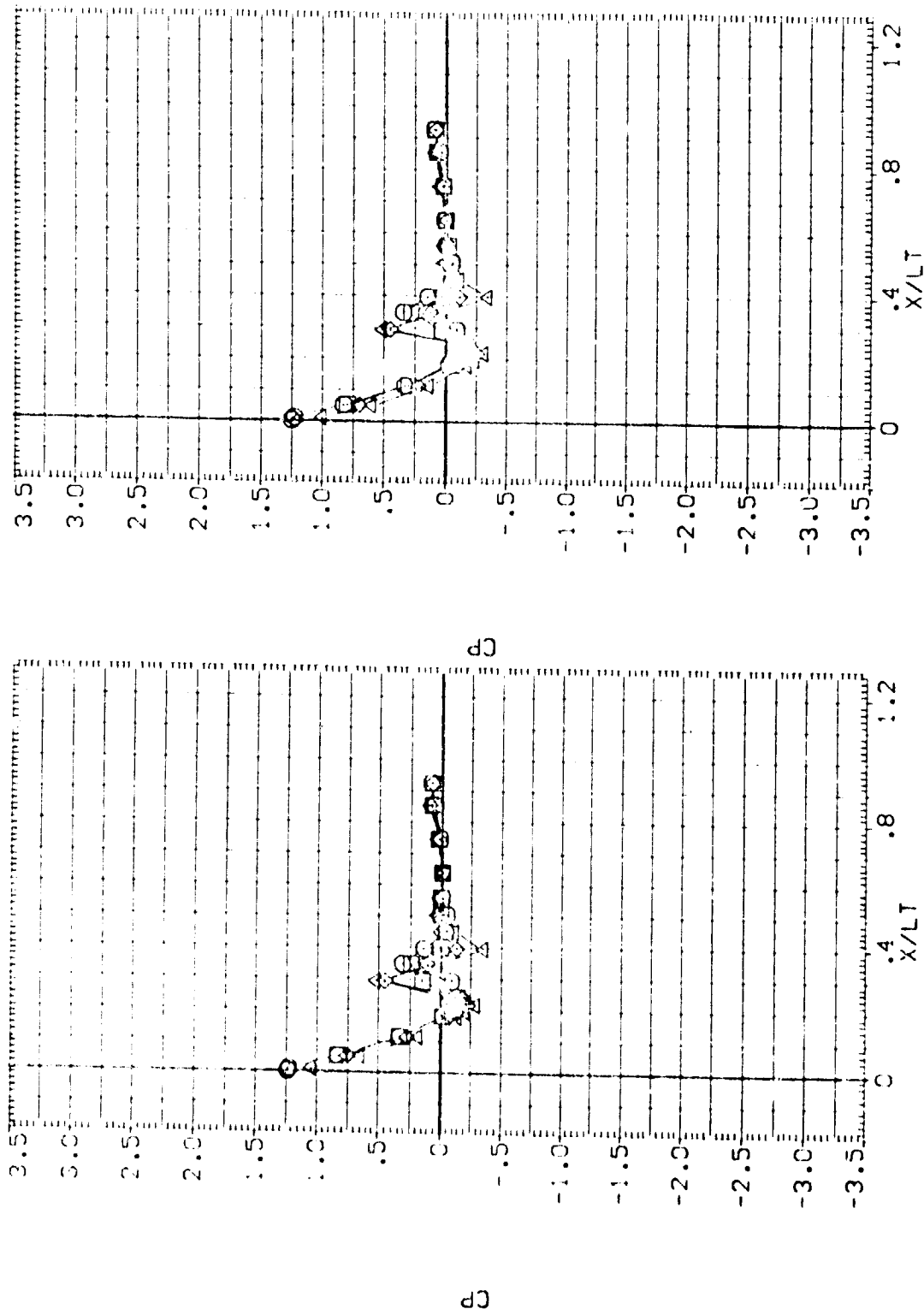


LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES



ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

SYMBOL	P-1	BETAS	ALPHA0	PARAMETRIC VALUES		
				MACH	ELEVON	SPORON
○	.000	-2.030	7.830	.000	.000	.000
△	30.000	.040		.000	.000	.000
◇	60.000					
×	90.000					



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 EXTERNAL TANK (RB1T33)

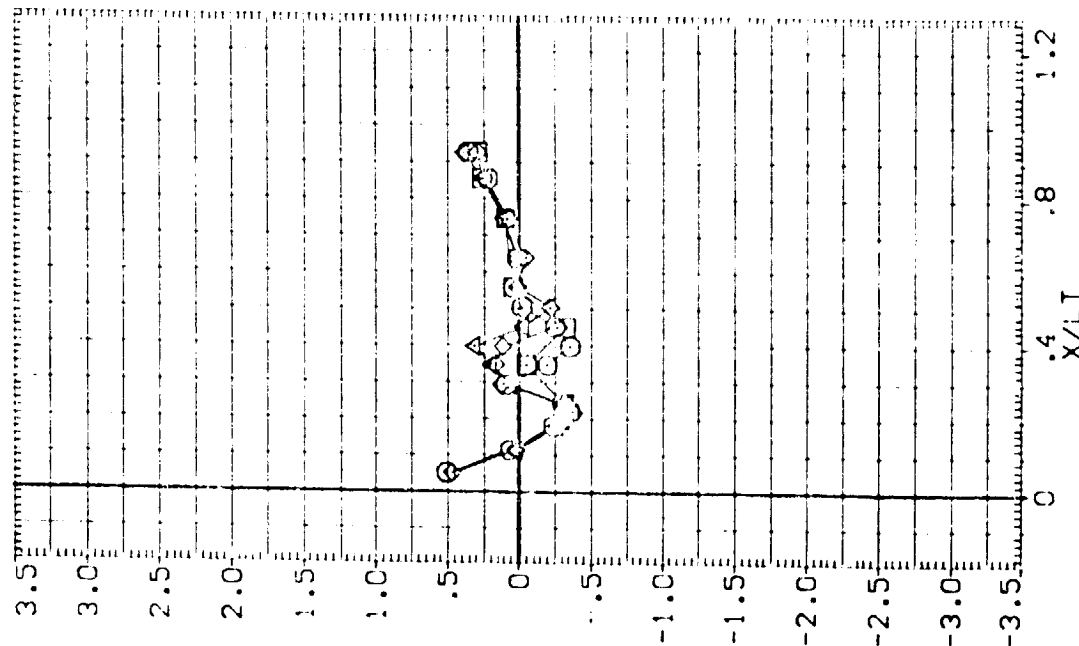
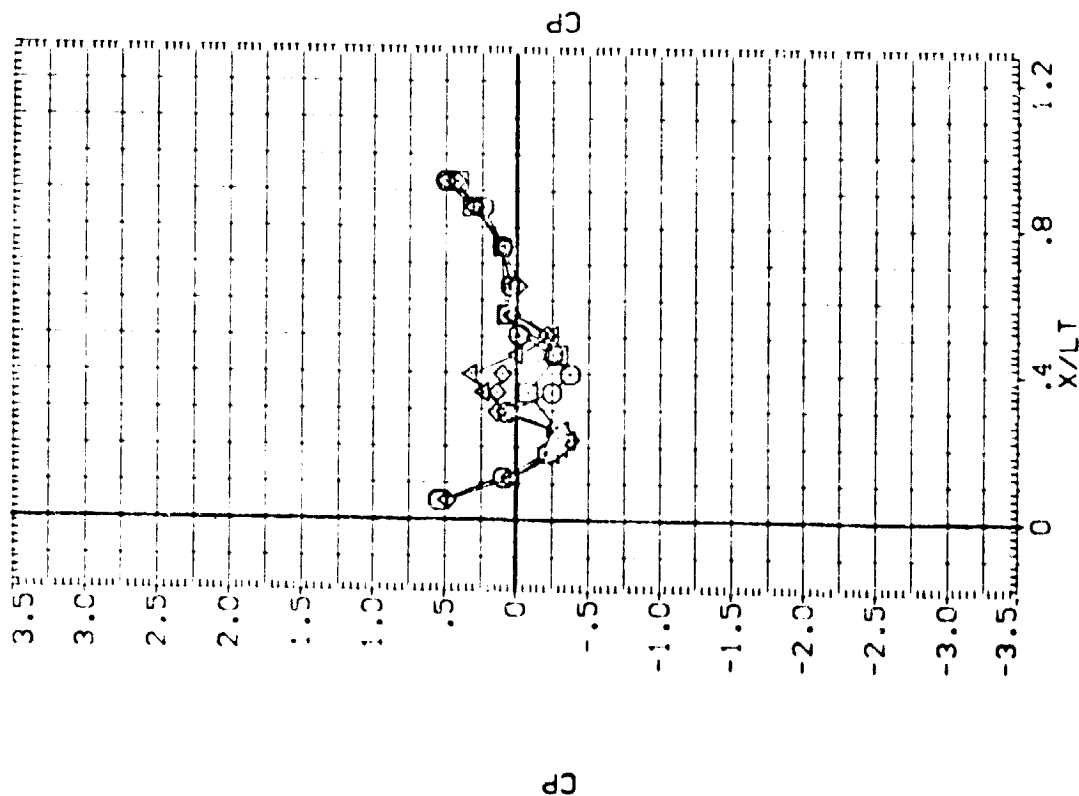
SYMBOL

120.000
135.000
150.000
165.000

BETA0 -2.030
ALPHA0 7.830
.040

MACH
RUDDER

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOILER
.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-016 1A14 01+112+S12N25+AT10 EXTERNAL TANK (RB:133)

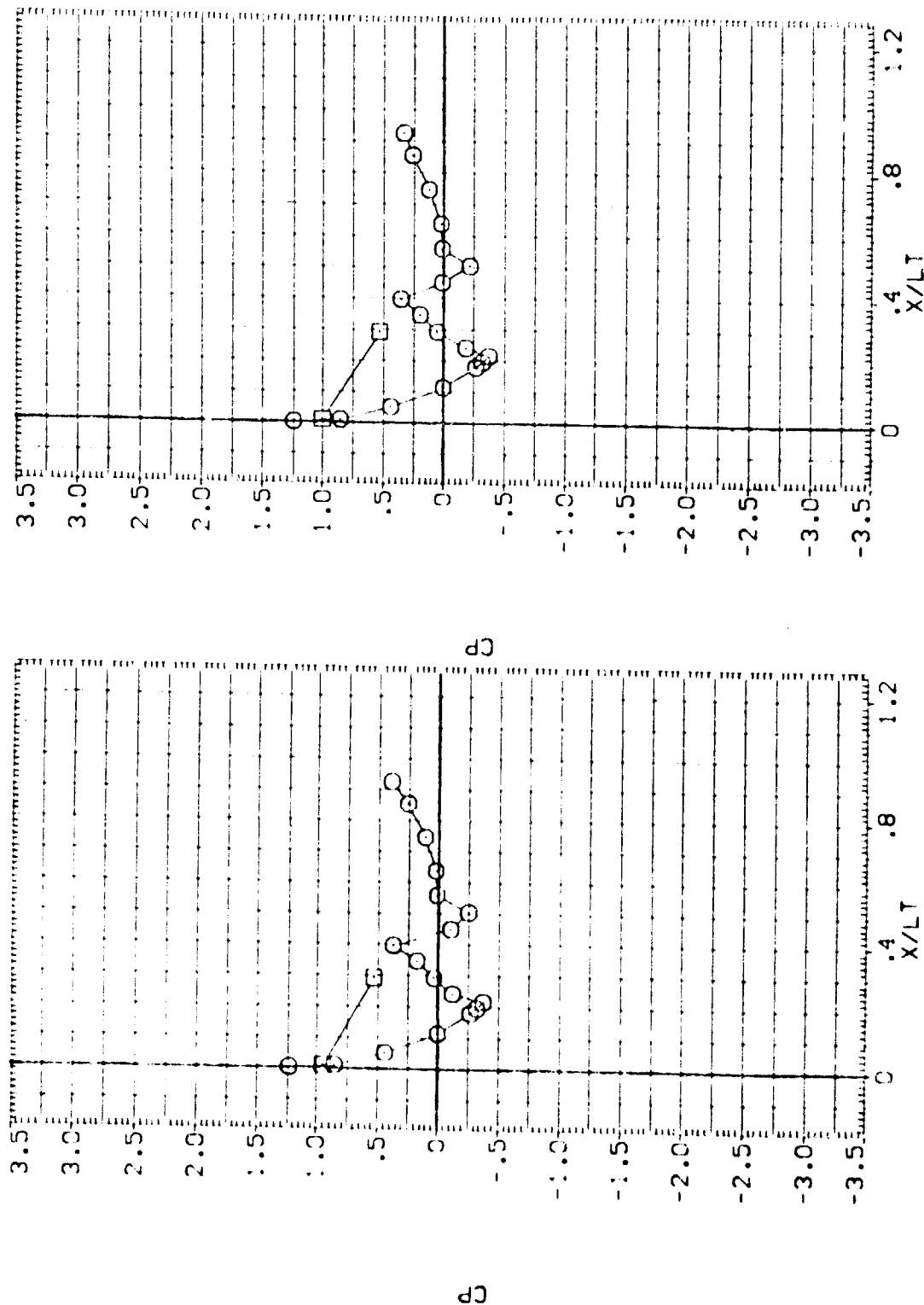
SYMBOL
180.000
270.000

PHI
180.000
270.000

BETAC
-2.030
.040

ALPHAO
7.830

PARAMETRIC VALUES
MACH .000
ELEVON .000
RUDDER .000
SPOILER .000

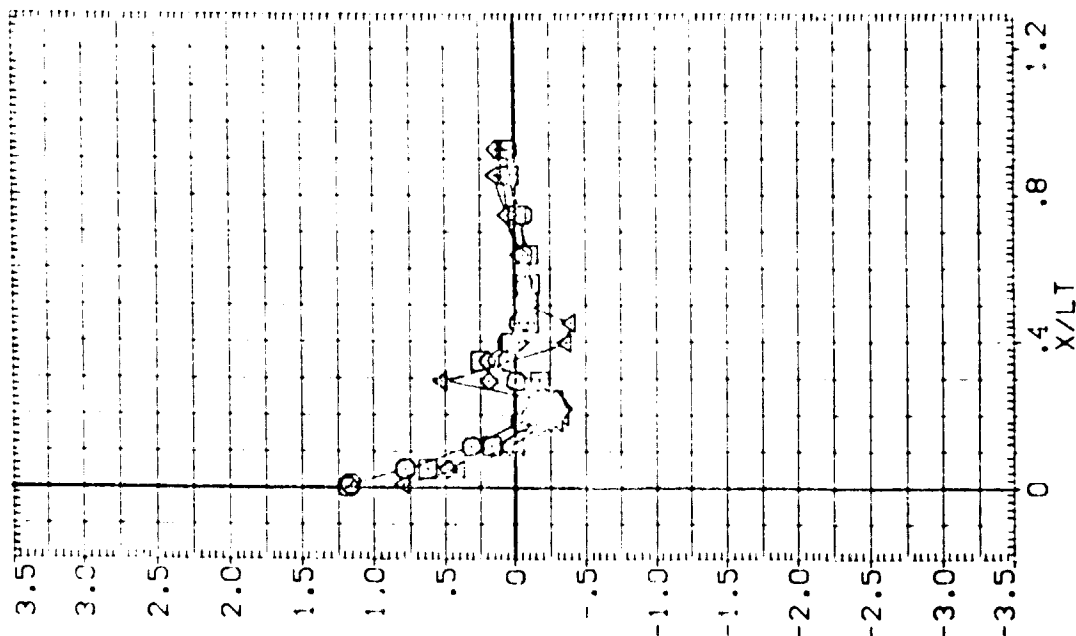
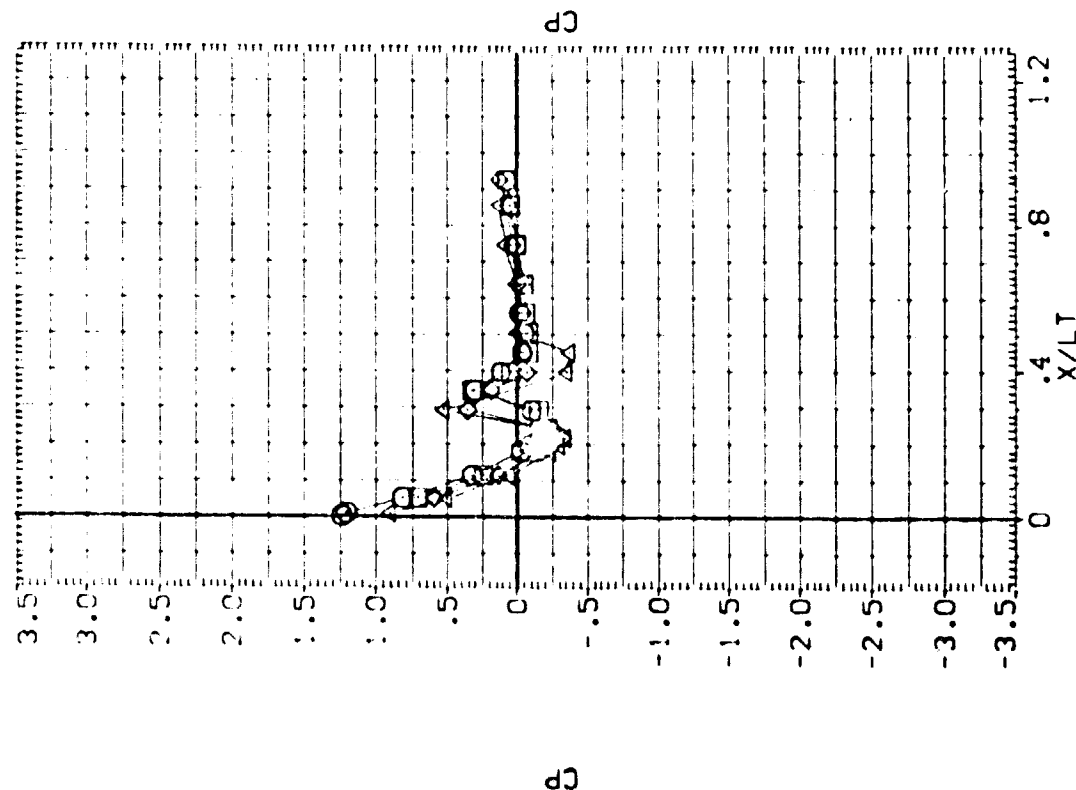


LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

SYMBOL
 ○
 □
 △
 ◇

BETA0 4.060
 ALPHAB 7.870
 8.110

PARAMETRIC VALUES
 MACH 1.250
 ELEVON .000
 RUDDER .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1T33)

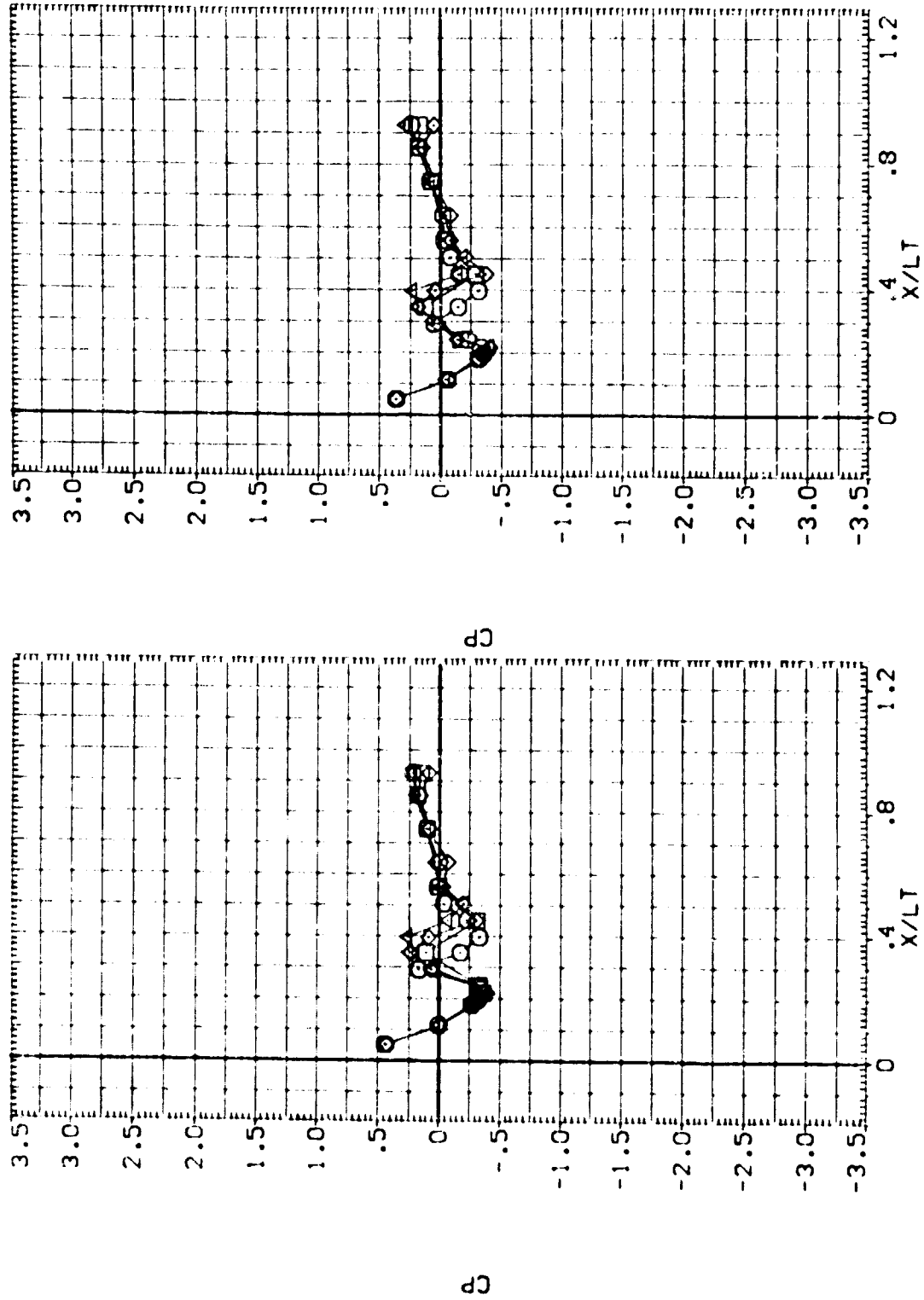
SYMBOL
 ○
 ◇
 △

PHI
 120.000
 135.000
 150.000
 165.000

BETA0
 4.060
 8.110

ALPHA0
 7.870

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 EXTERNAL TANK (RB1133)

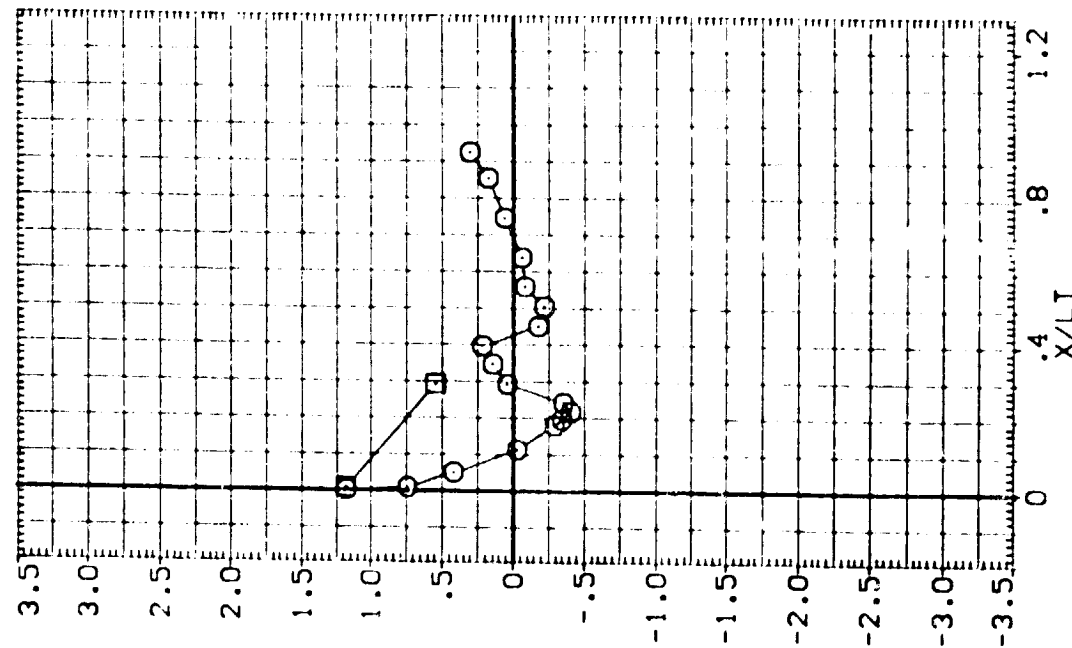
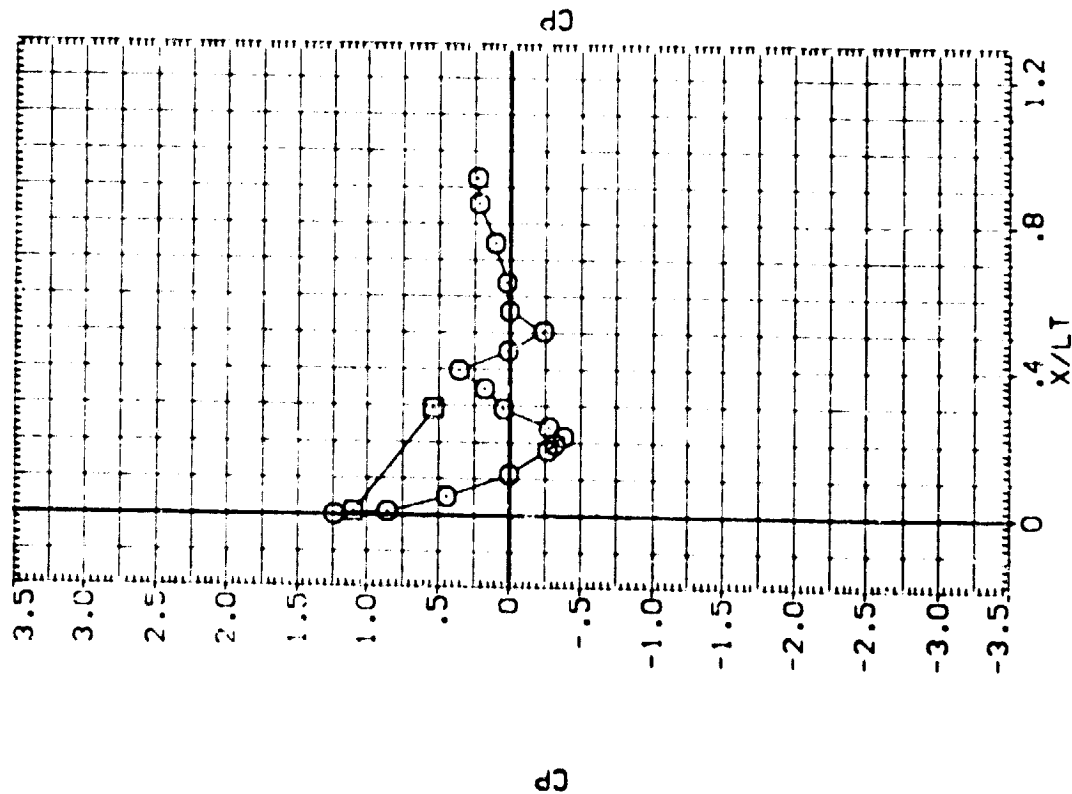
SYMBOL
○ □

PHI 180.000
270.000

BETA 4.050
8.110

ALPHA 7.870

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPOILER .000

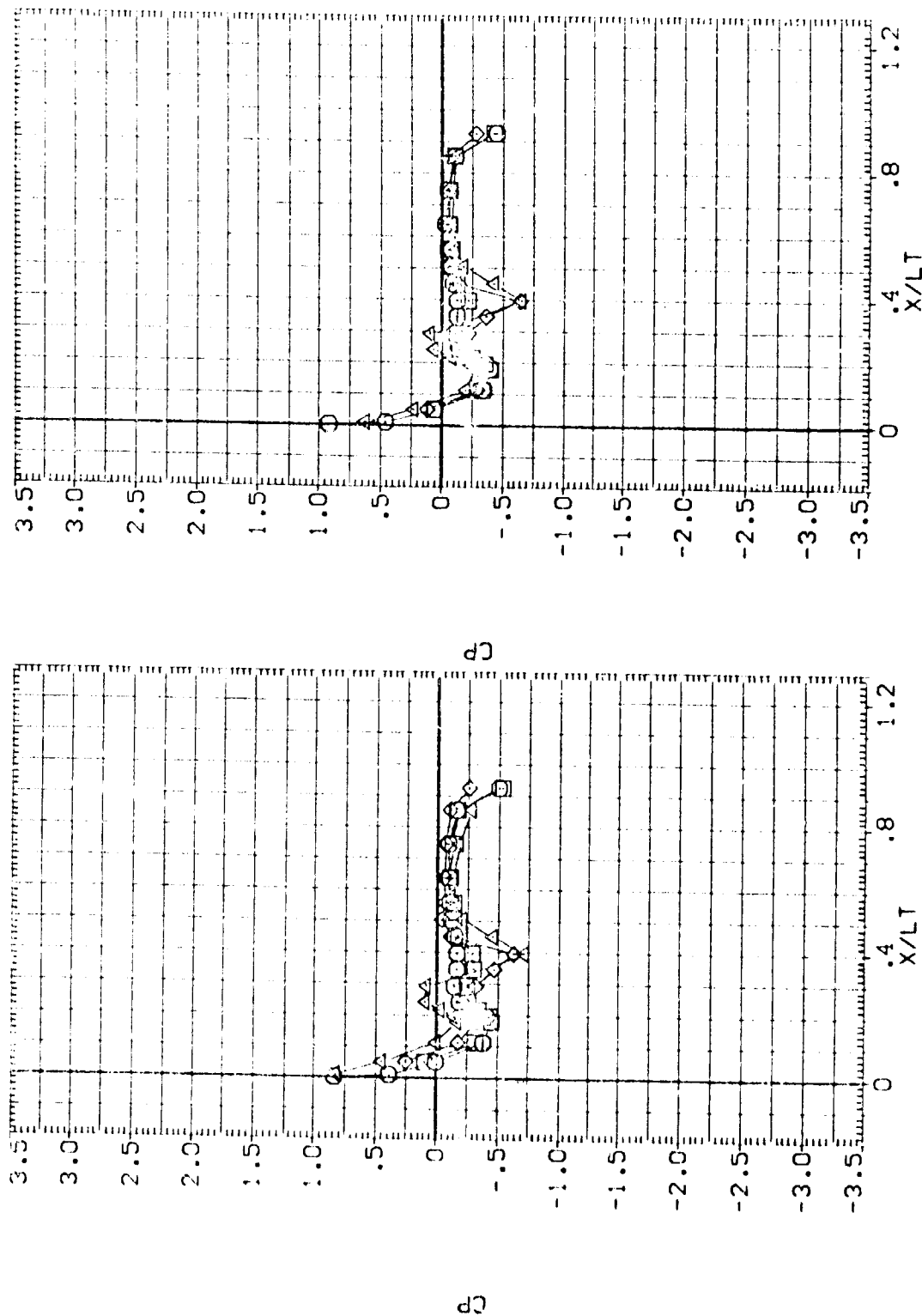


LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 EXTERNAL TANK (RB1134)

PARAMETRIC VALUES
 MACH .600
 ELEVATION .000
 RUDDER .000
 SPOON .000

SYMBOL
 PH: .000
 BETA: -8.073
 ALPHA: -8.361
 30.000
 60.000
 90.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

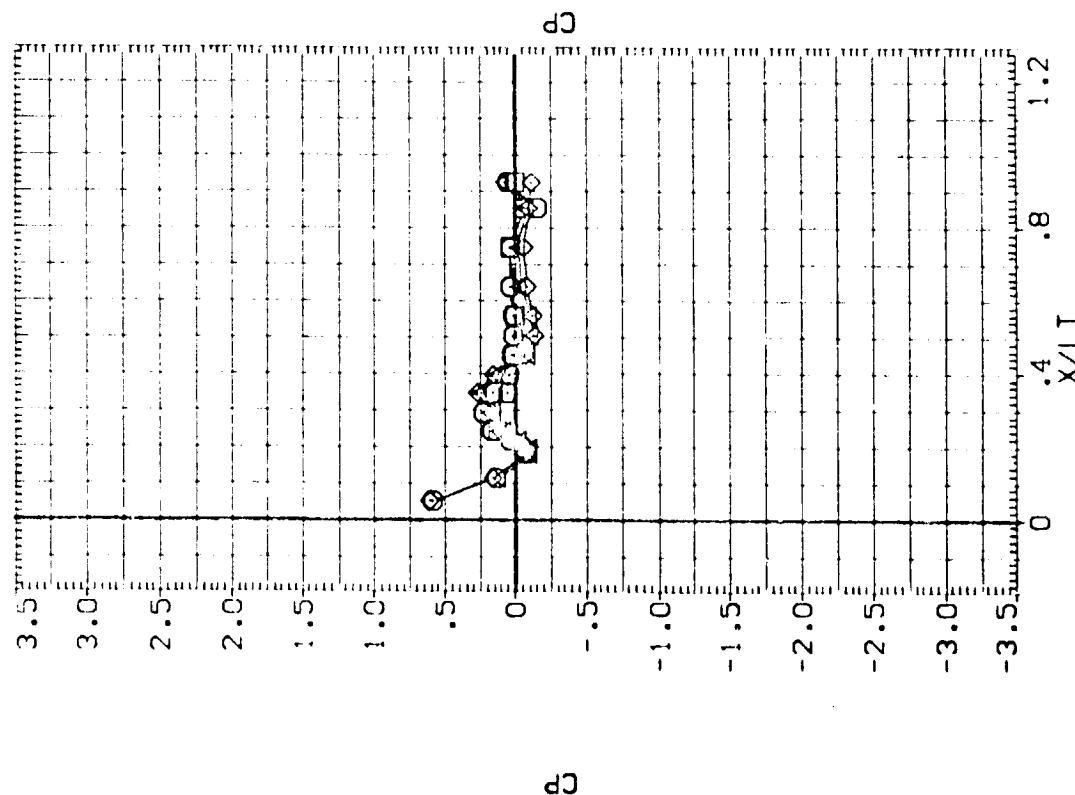
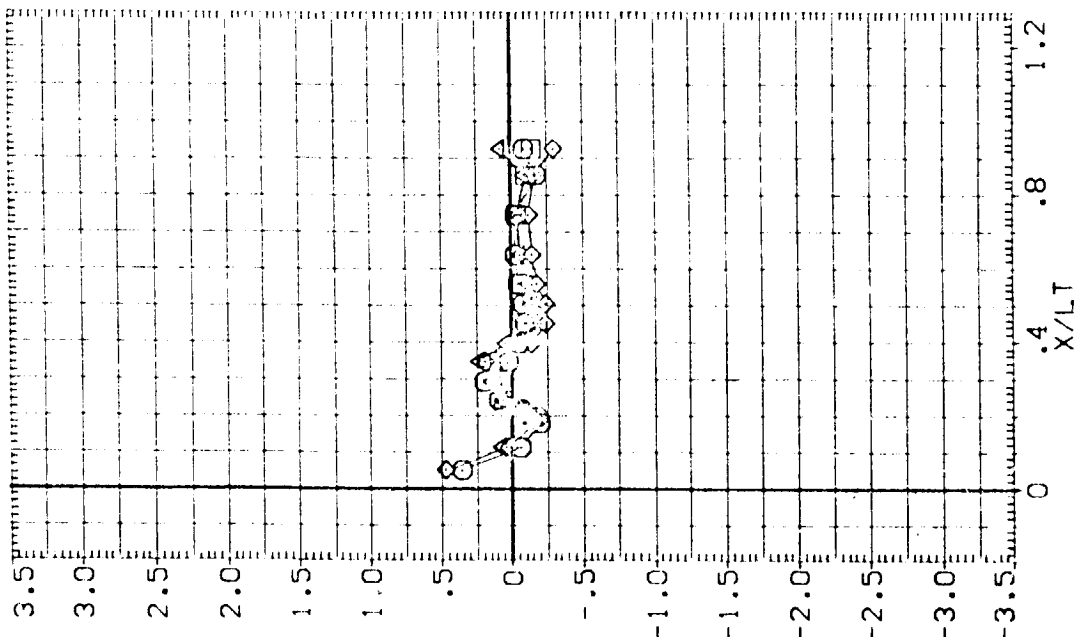
ARC11-716 IA14 01+112+S12N25+AT11 EXTERNAL TANK (RB1T34)

SYMBOL

PHI
120.000
135.000
150.000
165.000

BETAT
-8.070
-8.360
-8.650

PARAMETRIC VALUES
MACH .000
ELEVON .000
SPC39A .000



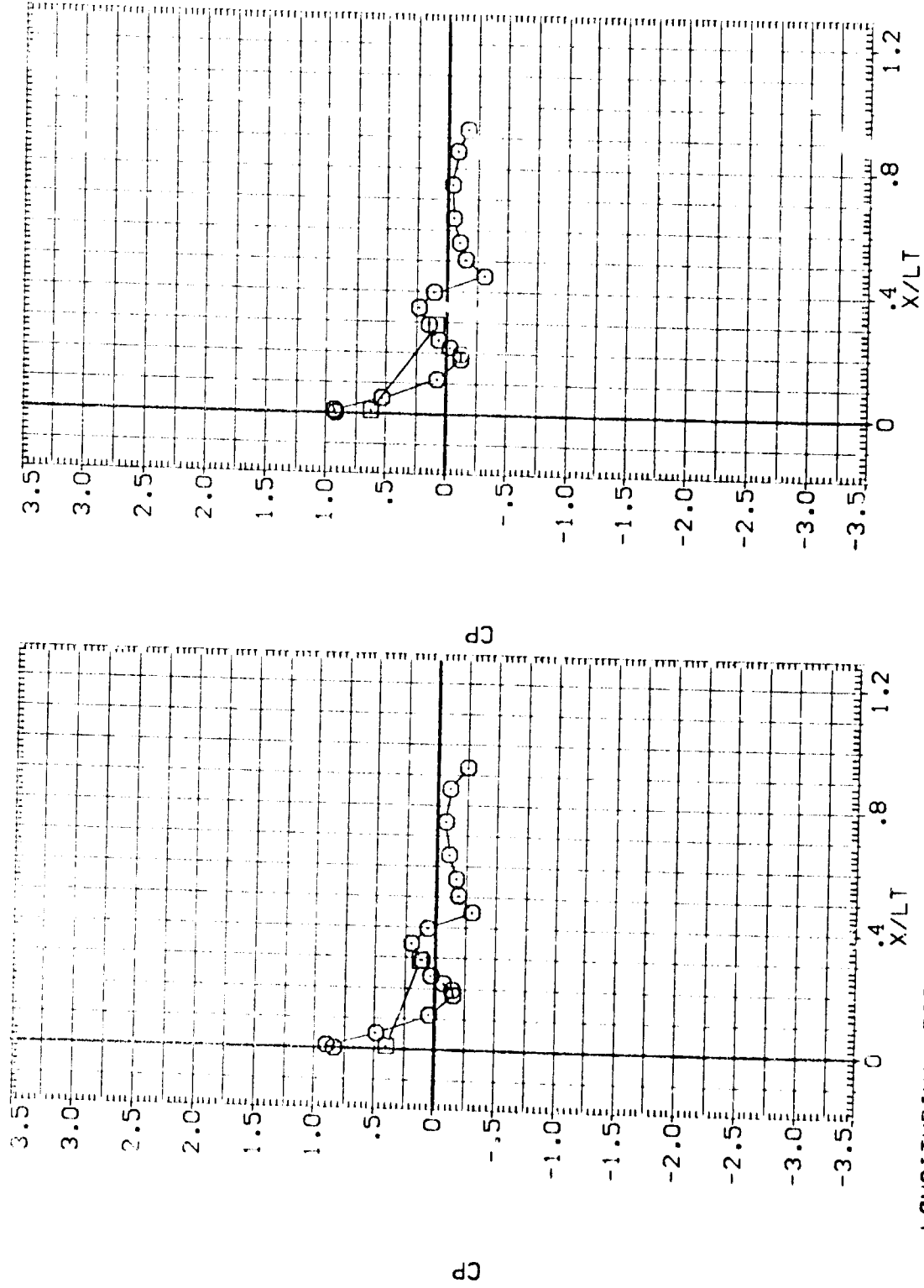
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T34)

SYMBOL

PHI 180.000
270.000
BETAT -6.070
ALPHA -5.280
MACH .000
RUDDER .000

PARAMETRIC VALUES
MACH .000
RUDDER .000
ELEVON .000
SERVO .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T34)

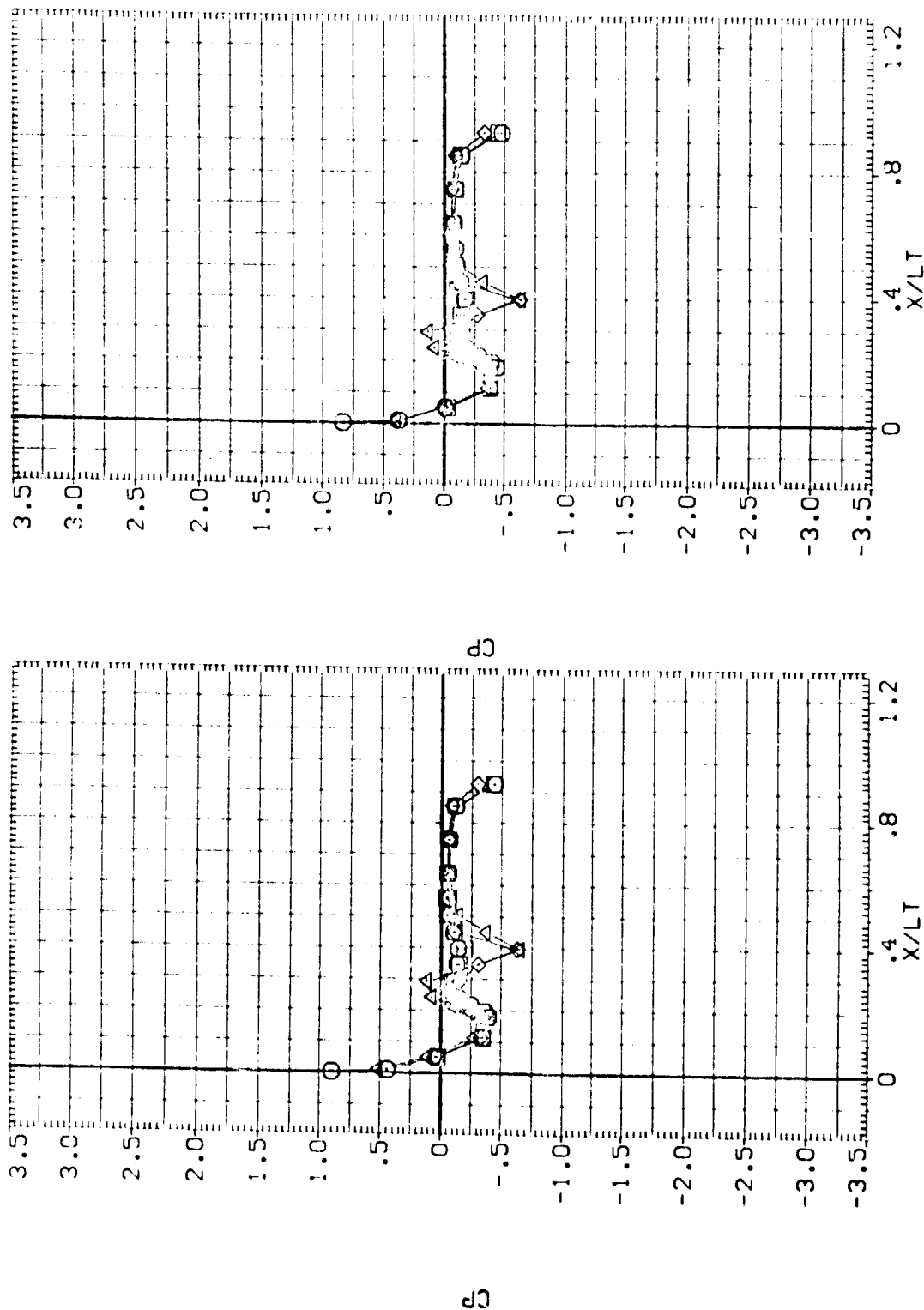
SYMBOL
 O
 □
 △

PHI
 .000
 30.000
 60.000
 90.000

BETAT
 4.080
 8.150

ALPHAT
 -8.320

PARAMETRIC VALUES
 MACH .800 ELEVON .000
 RUDDER .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

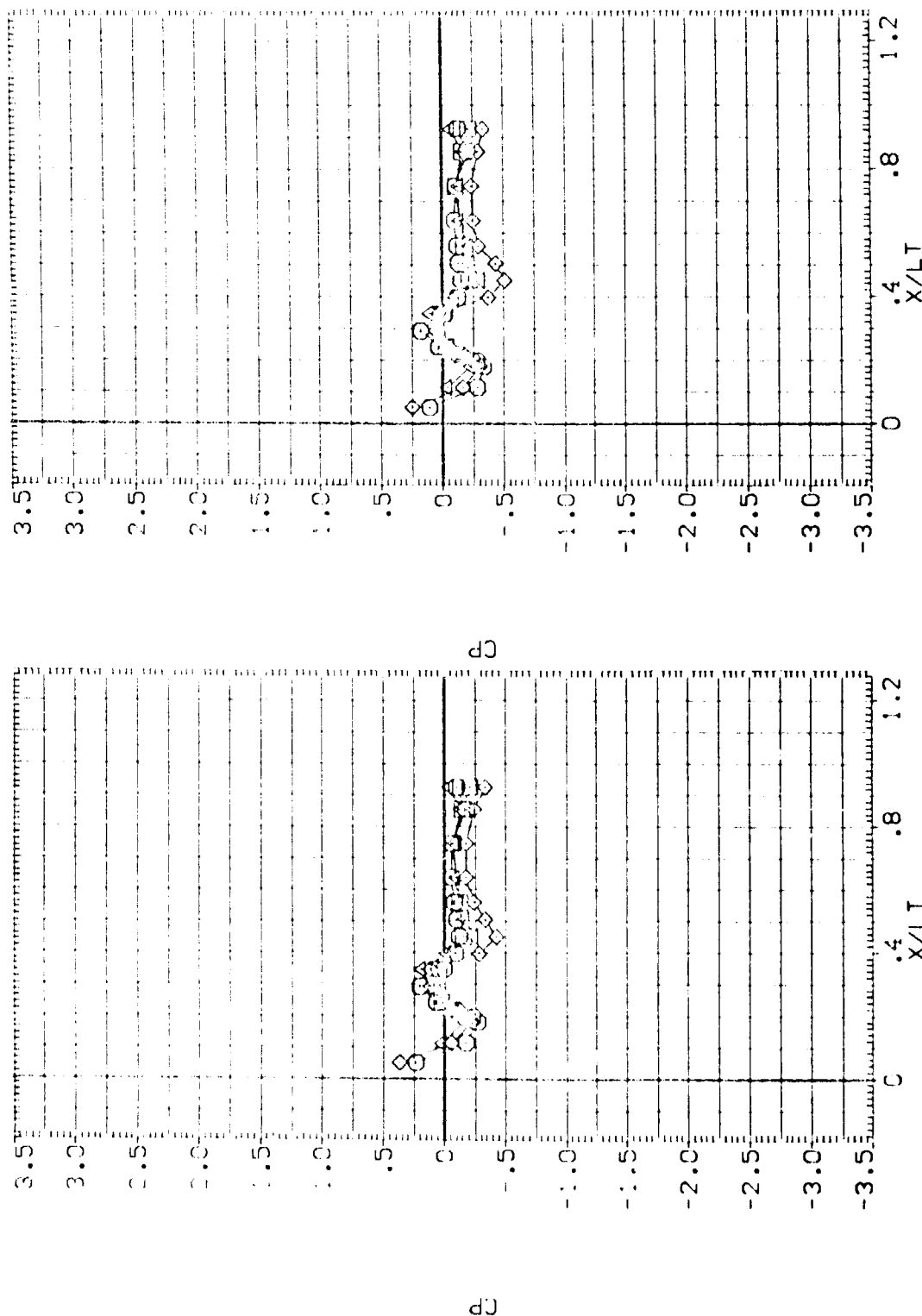
ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T34)

SYMBOL

PHI 120.000
BETAT 4.080
ALPHA -8.320
135.000 8.150
150.000
165.000

PARAMETRIC VALUES

MACH .600
RUDDER .000
ELEVON .000
SP039K .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T34)

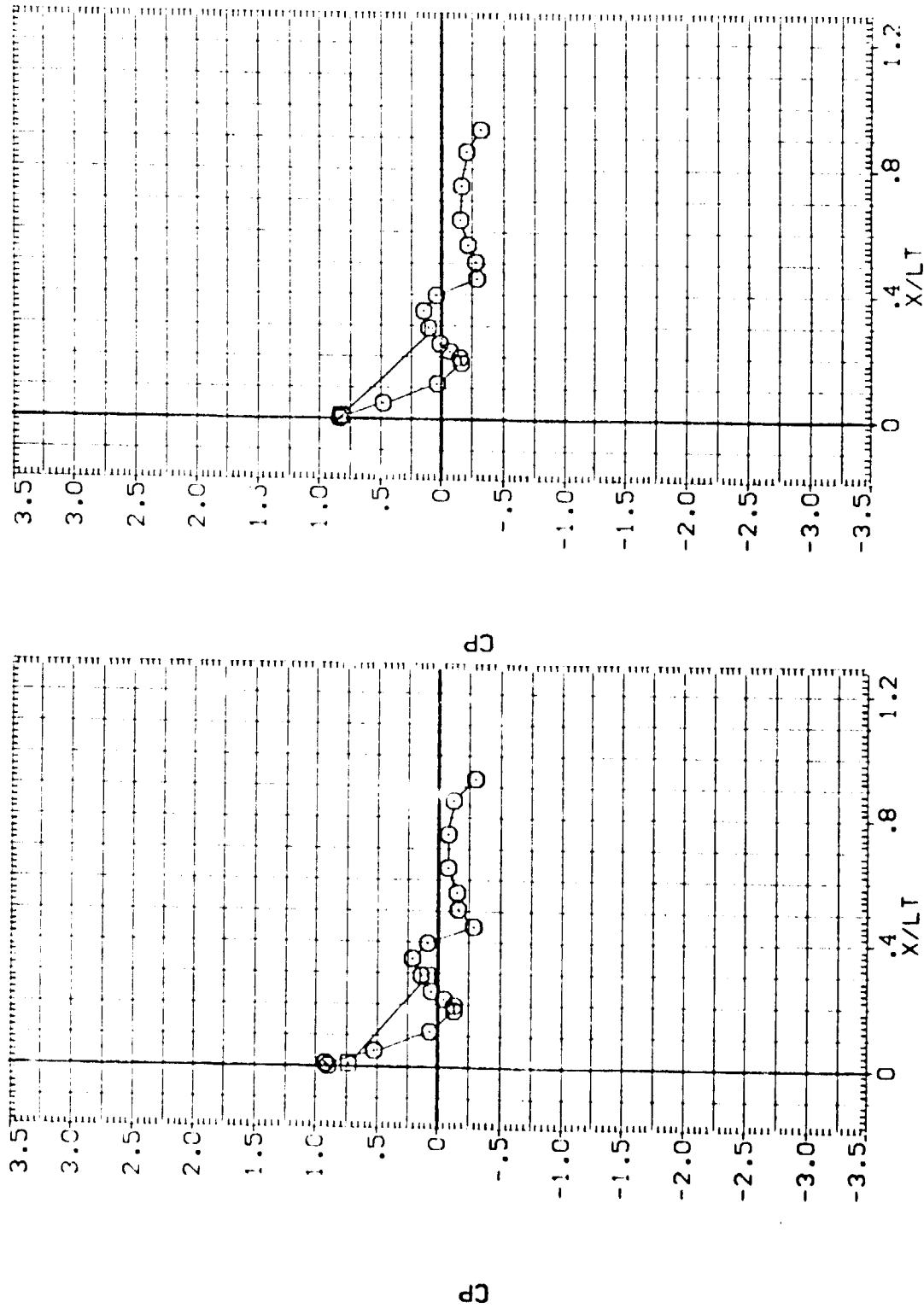
SYMBOL

180.000
270.000

BETAT 4.080
8.150

ALPHAT -8.320

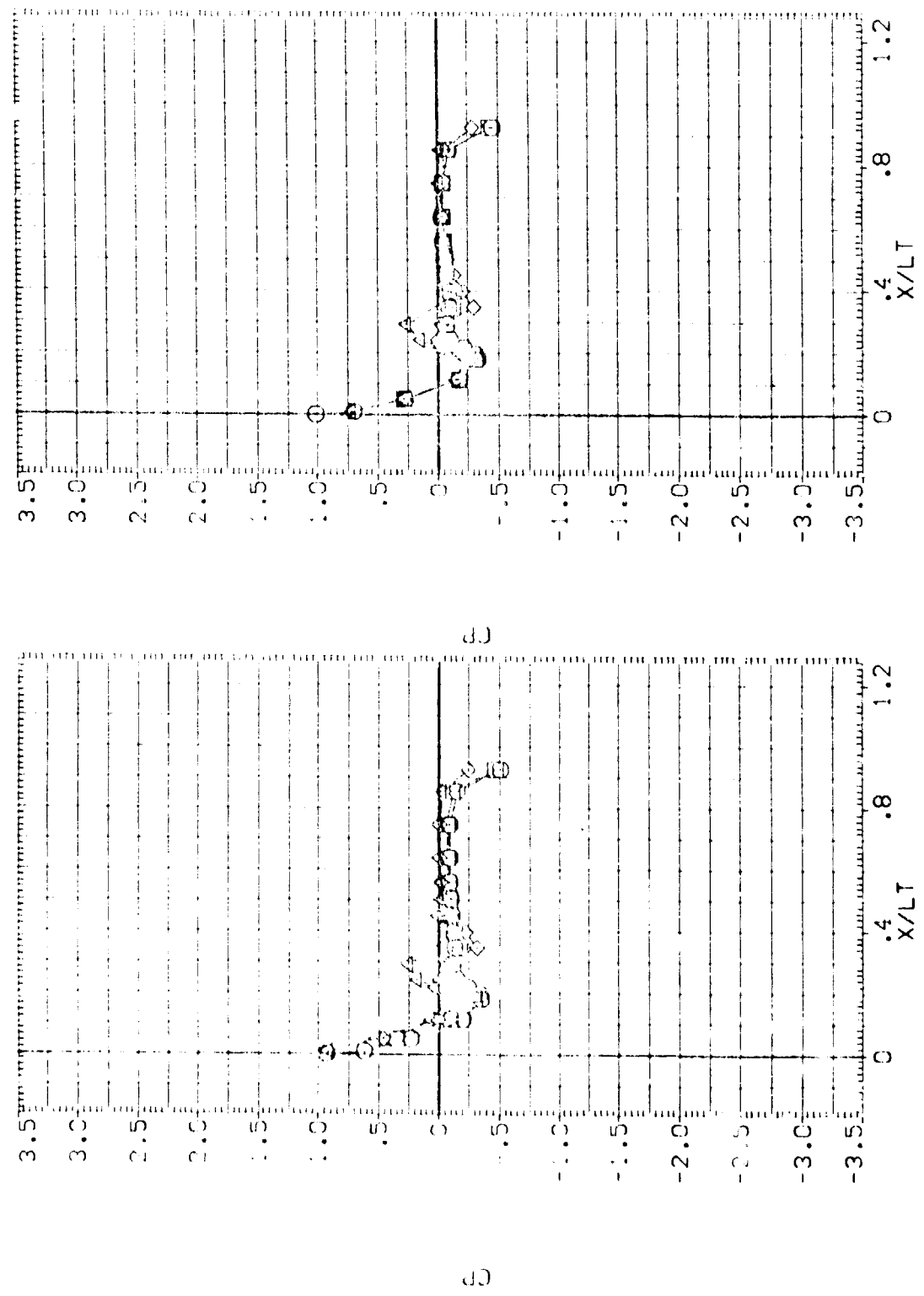
PARAMETRIC VALUES
MACH .600
RUDDER .000
ELEVON .000
SPDRX .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T34)

SYMBOL	PH1	BETA1	ALPHA1	PARAMETRIC VALUES	
	.000	-8.150	.000	MACH	ELEVCH
	30.000	.000	.000	RUDER	SPOBPK
	60.000				
	90.000				



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T1:2+S12N25+AT11 EXTERNAL TANK (RB134)

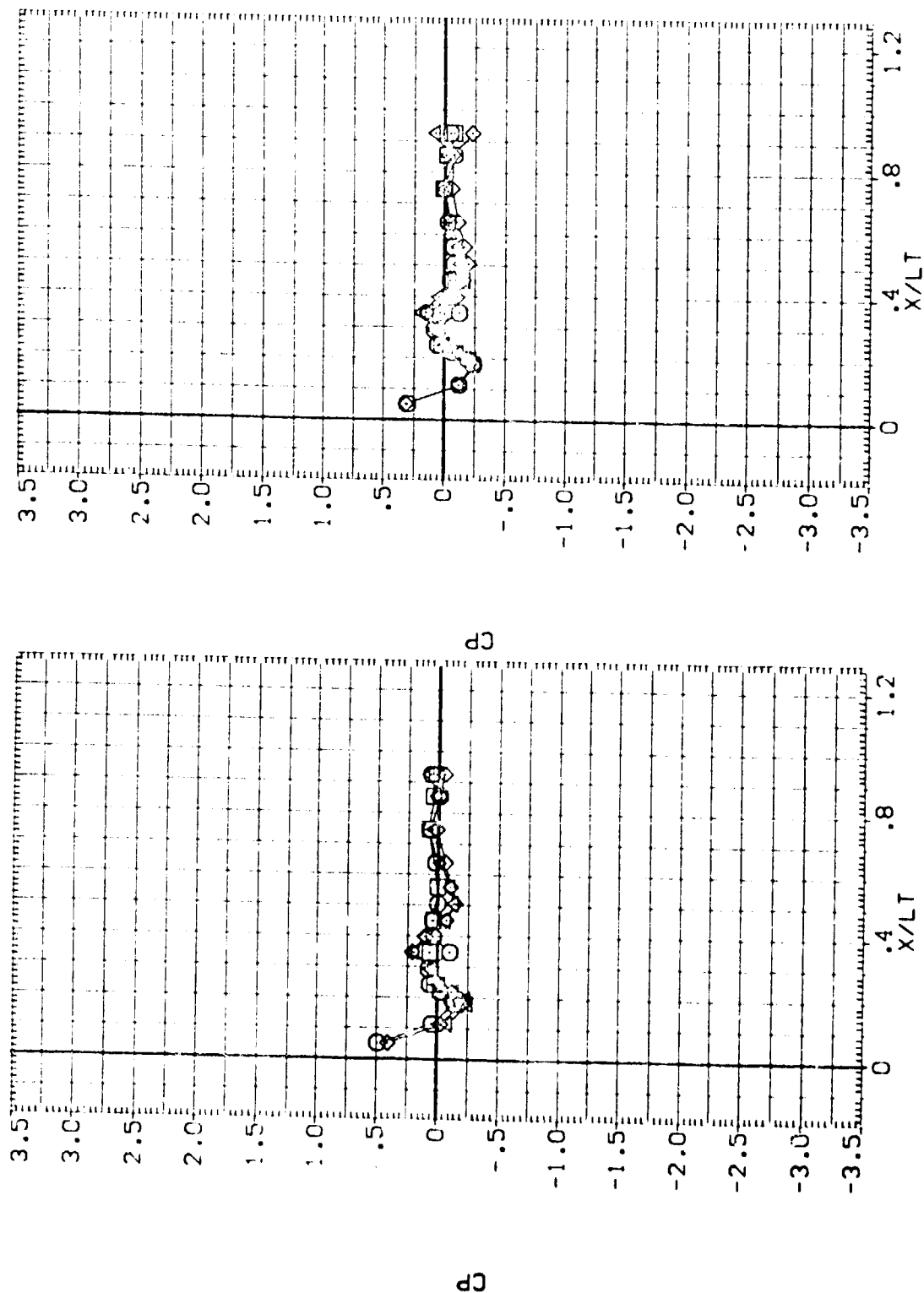
SYMBOL

PHI
120.000
135.000
150.000
165.000

BETAT
-8.150
.000

ALPHAT
-.490

PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000 SPOBRK .000



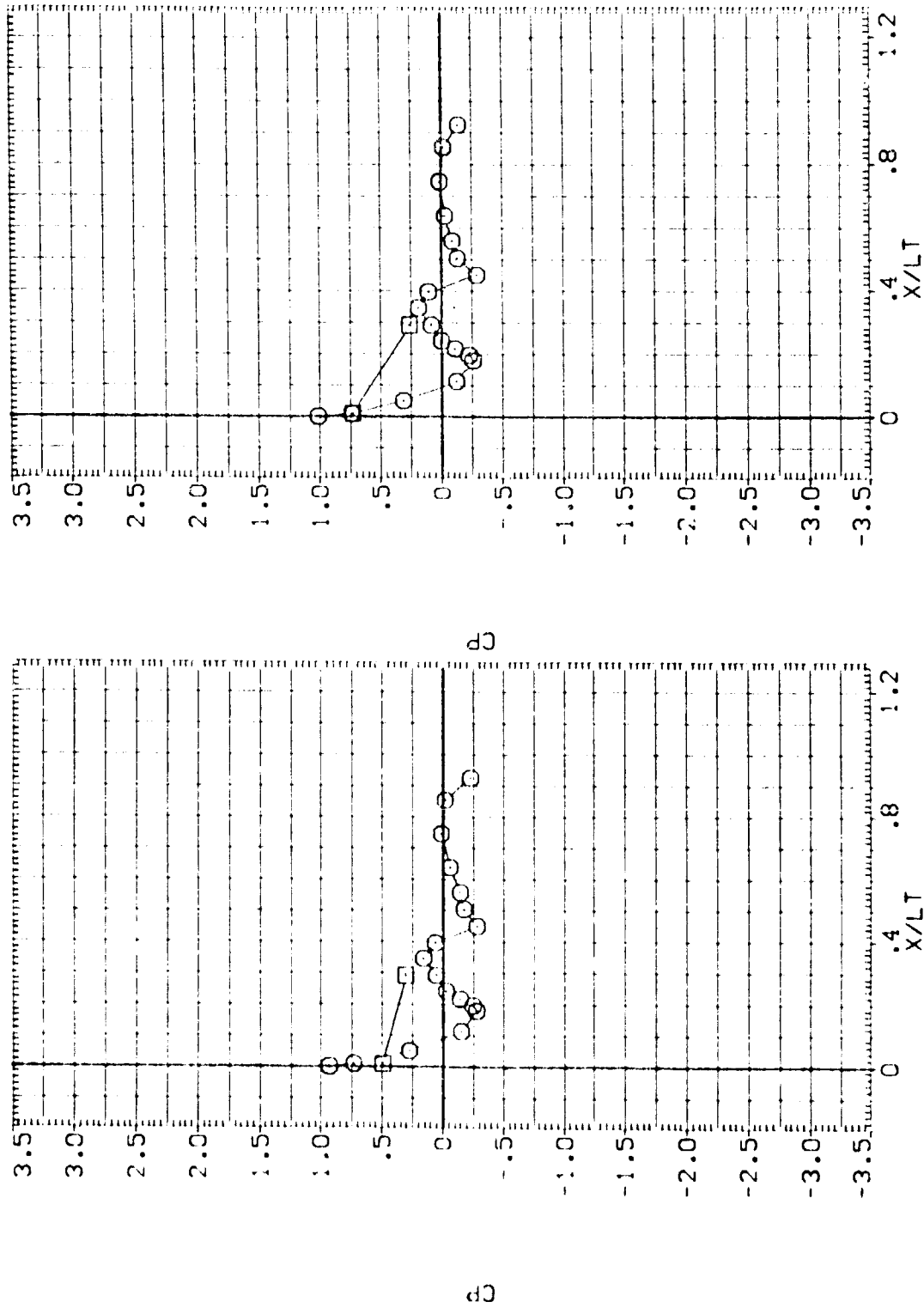
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S:2N25+AT11 EXTERNAL TANK (RB1T34)

SYMBOL
○
□

PHI: 180.000
270.000
BETAT -8.15C
ALPHA -1.49C

PARAMETRIC VALUES
MACH .800
ELEVON .000
RUDDER .000
SPOILER .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 EXTERNAL TANK (RB1T34)

SYMBOL

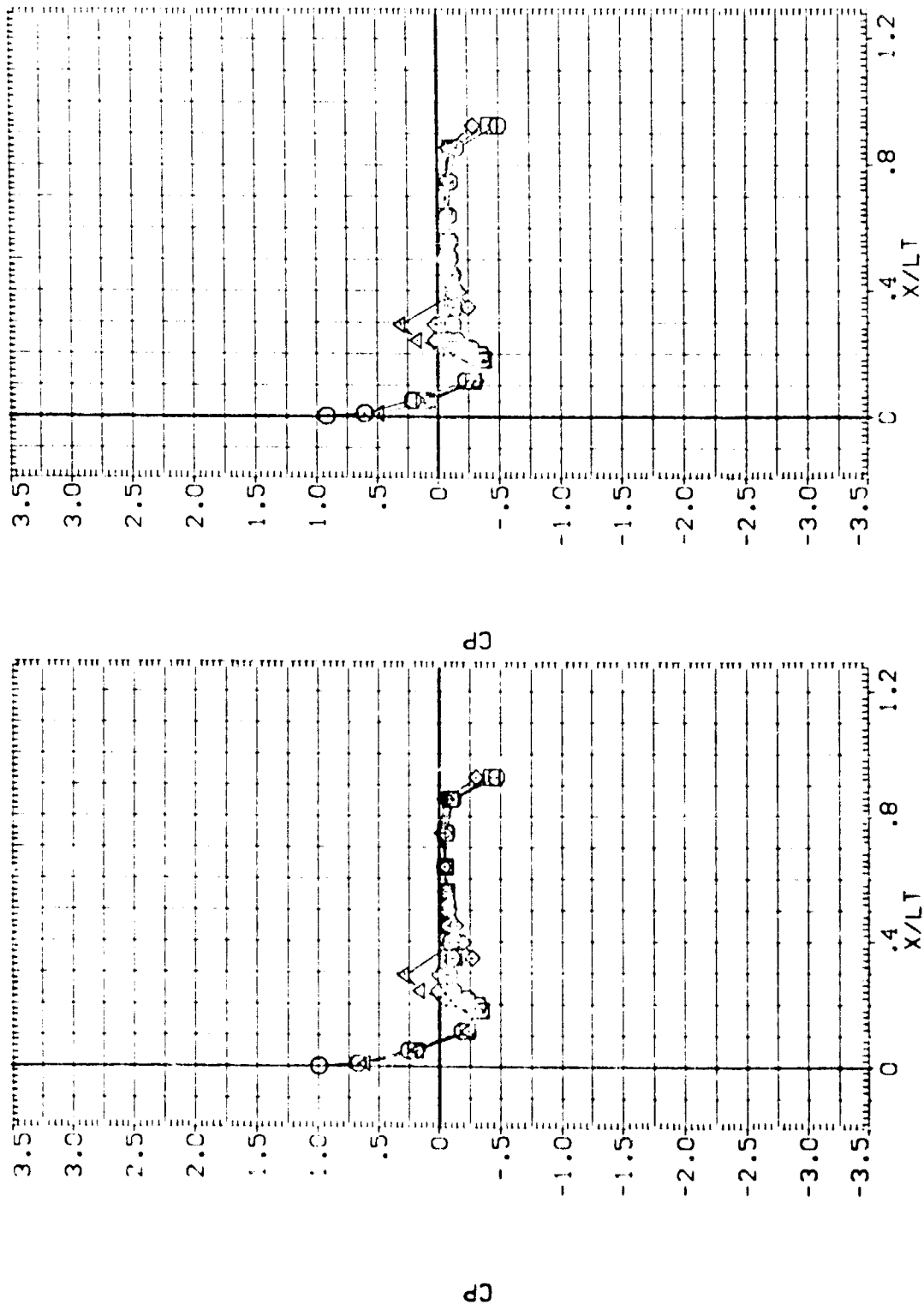
PHI
0
30.000
60.000
90.000

BETAT
4.090
8.150

ALPHAT
-4.70

PARAMETRIC VALUES

MACH .000
RUDDER .000
ELEVON .000
SPORON .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 EXTERNAL TANK (RB1134)

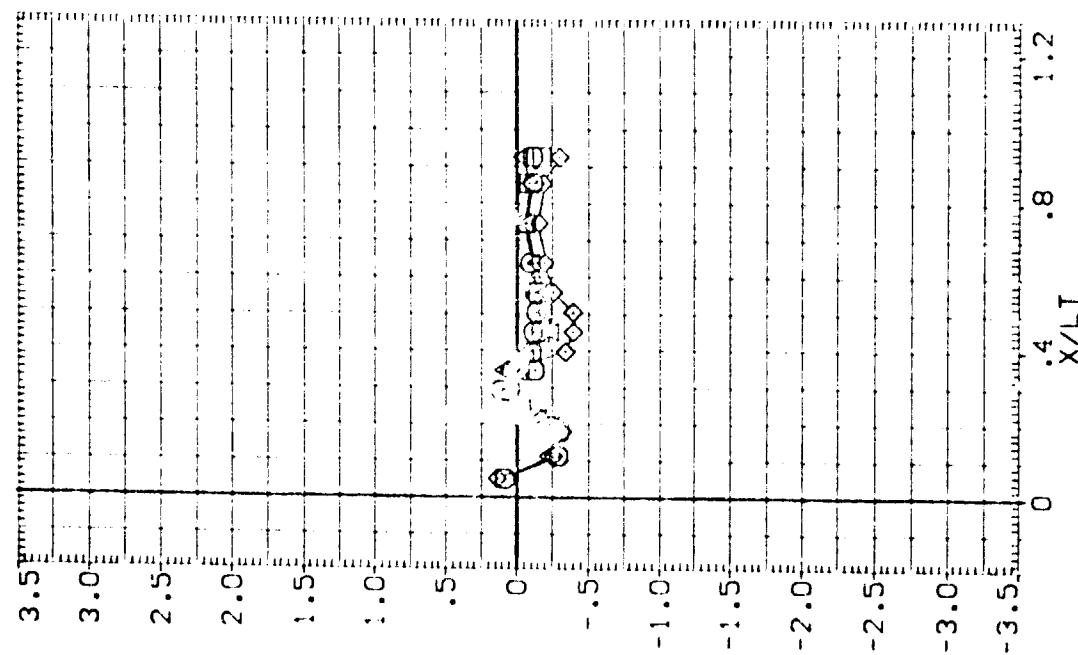
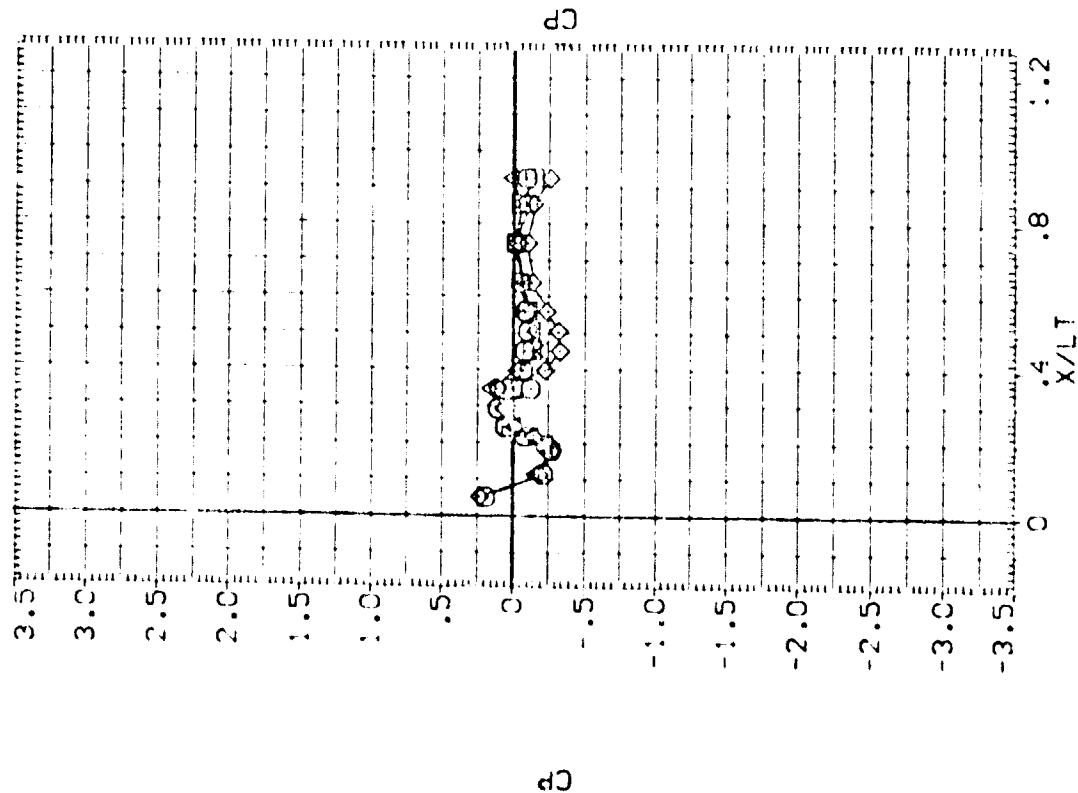
SYMBOL

PH: 170.000
135.000
150.000
165.000

BETAT 4.090
8.150

ALPHAT -1.470

PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000 SPODBA .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+712+S12+.25+A711 EXTERNAL TANK (R3:134)

SYMBOL
○
□

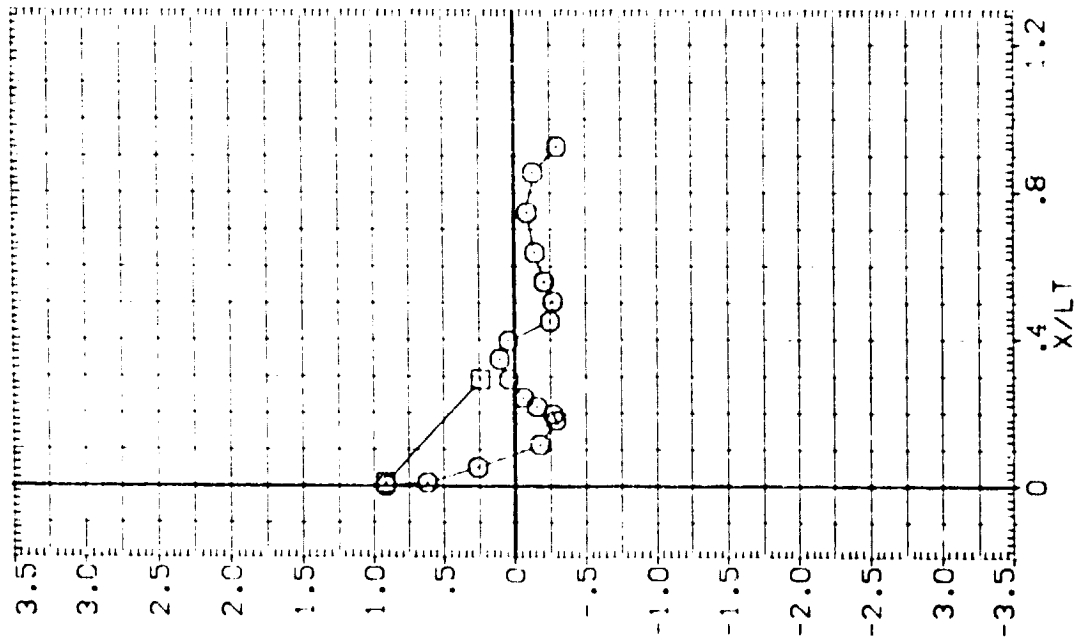
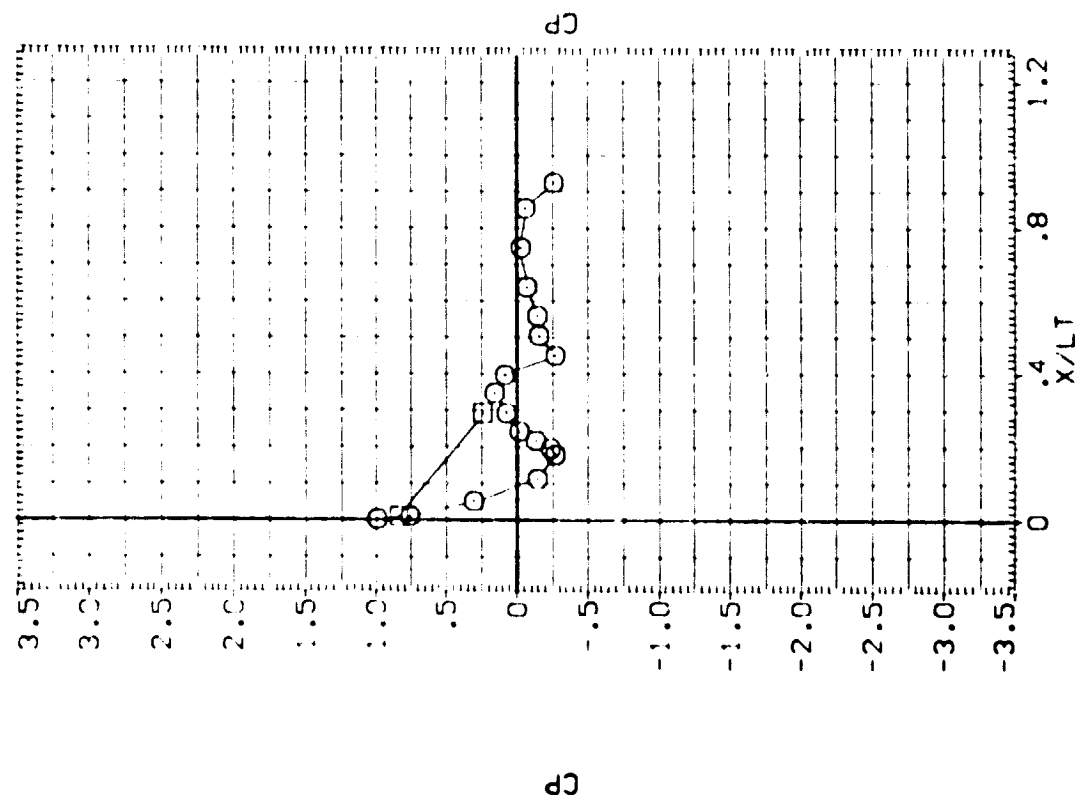
PARAM
180.000
270.000

BETAT
4.090
8.150

ALPHAT
-1.470

MAC
R00ER

PARAMETRIC VALUES
.600 ELEVON
.000 SPOBRK
.000



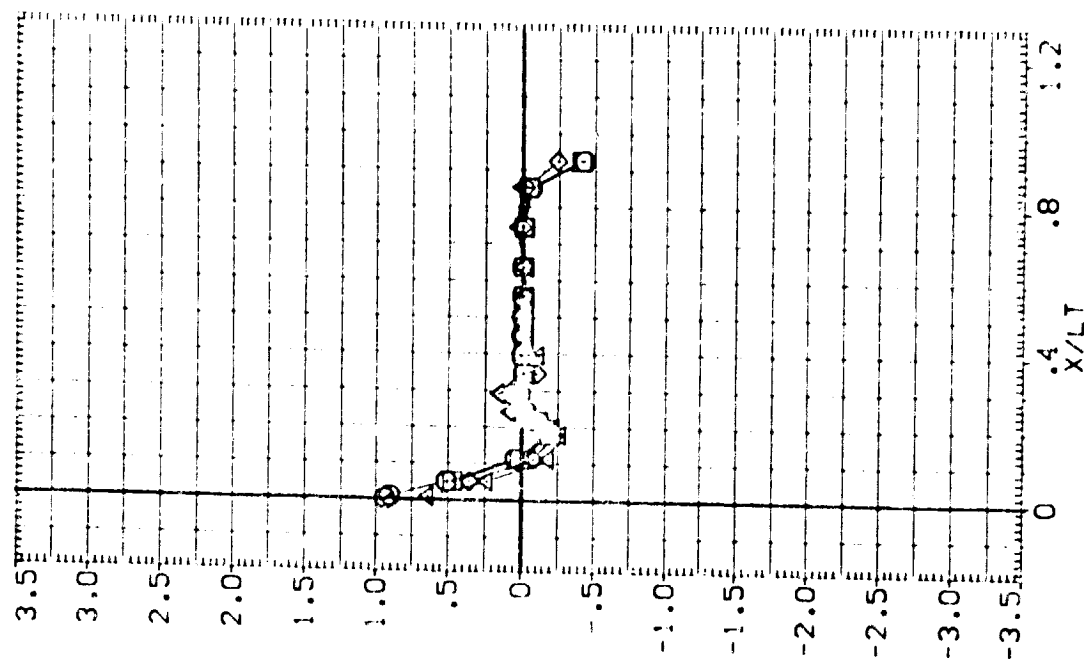
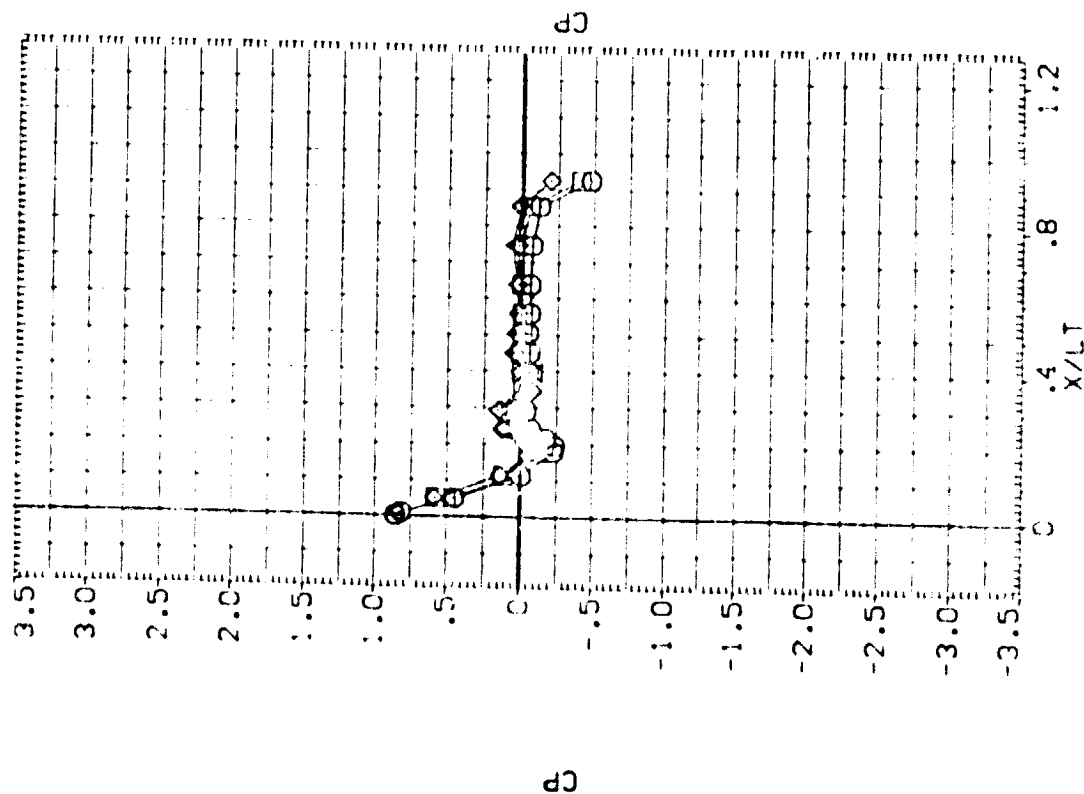
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:11-16 1A14 01+12+S12N25+AT11 EXTERNAL TANK (RB1134)

SYMBOL

PHI BETAT ALPHAT
 .000 -8.150 7.940
 30.000 .010
 60.000
 90.000

PARAMETRIC VALUES
 MACH .600 ELEVON .000
 RUDDER .000 SPOON .000

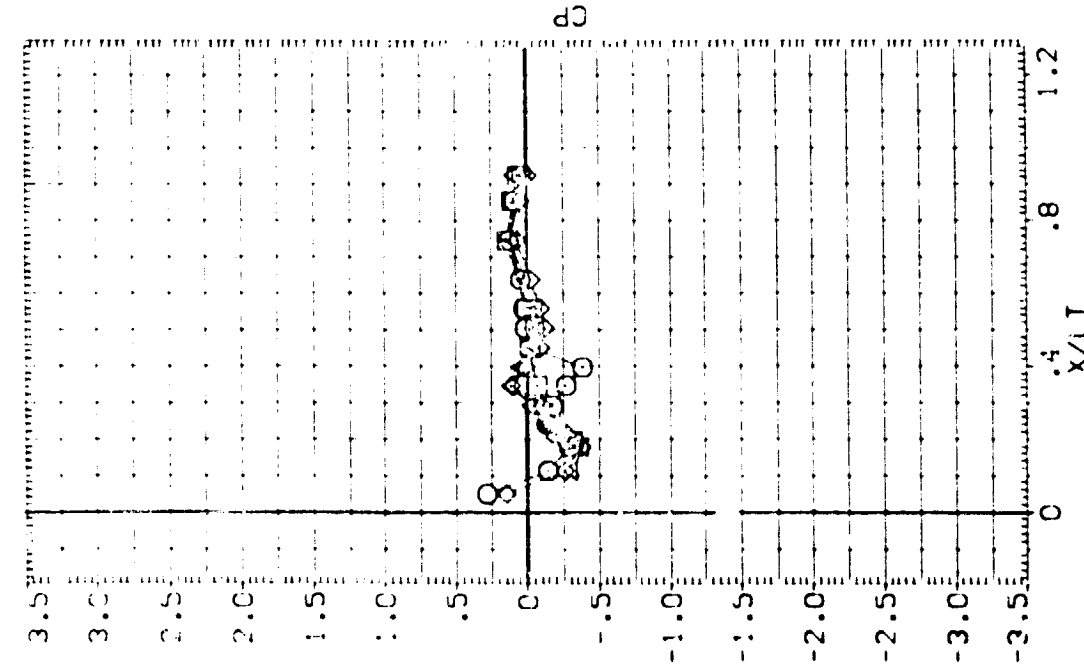
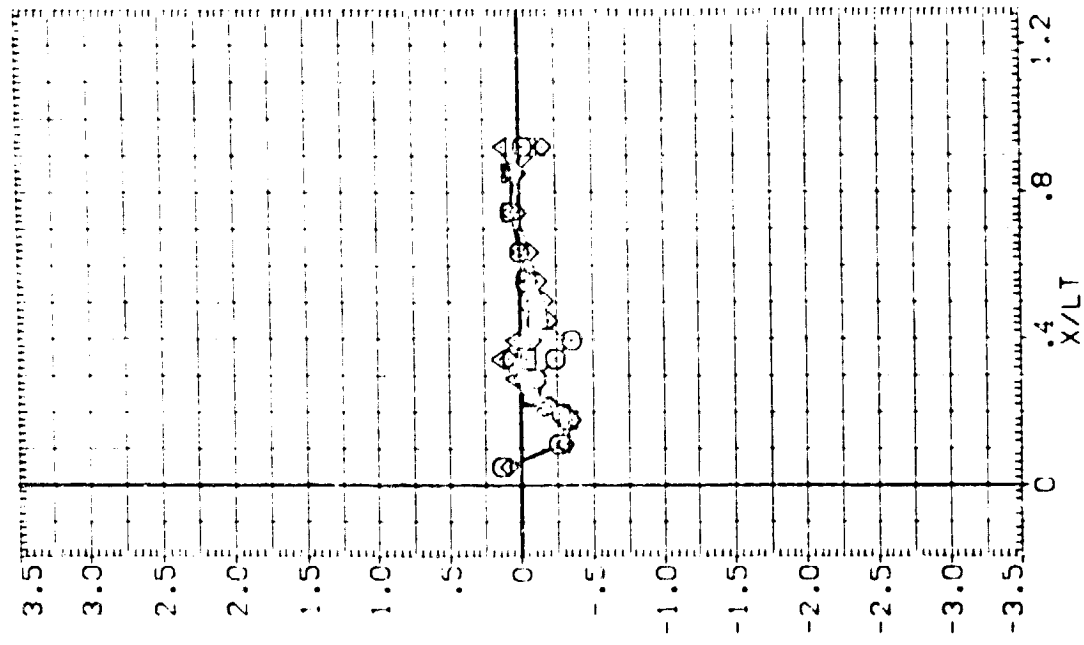


LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11: EXTERNAL TANK (RB1734)

PARAMETRIC VALUES
 MACH .600 ELEVON .000
 RUDER .000 SPDRIN .000

PHI BETAT ALPHAT
 170.000 -8.150 7.940
 36.000 .010
 50.000
 65.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

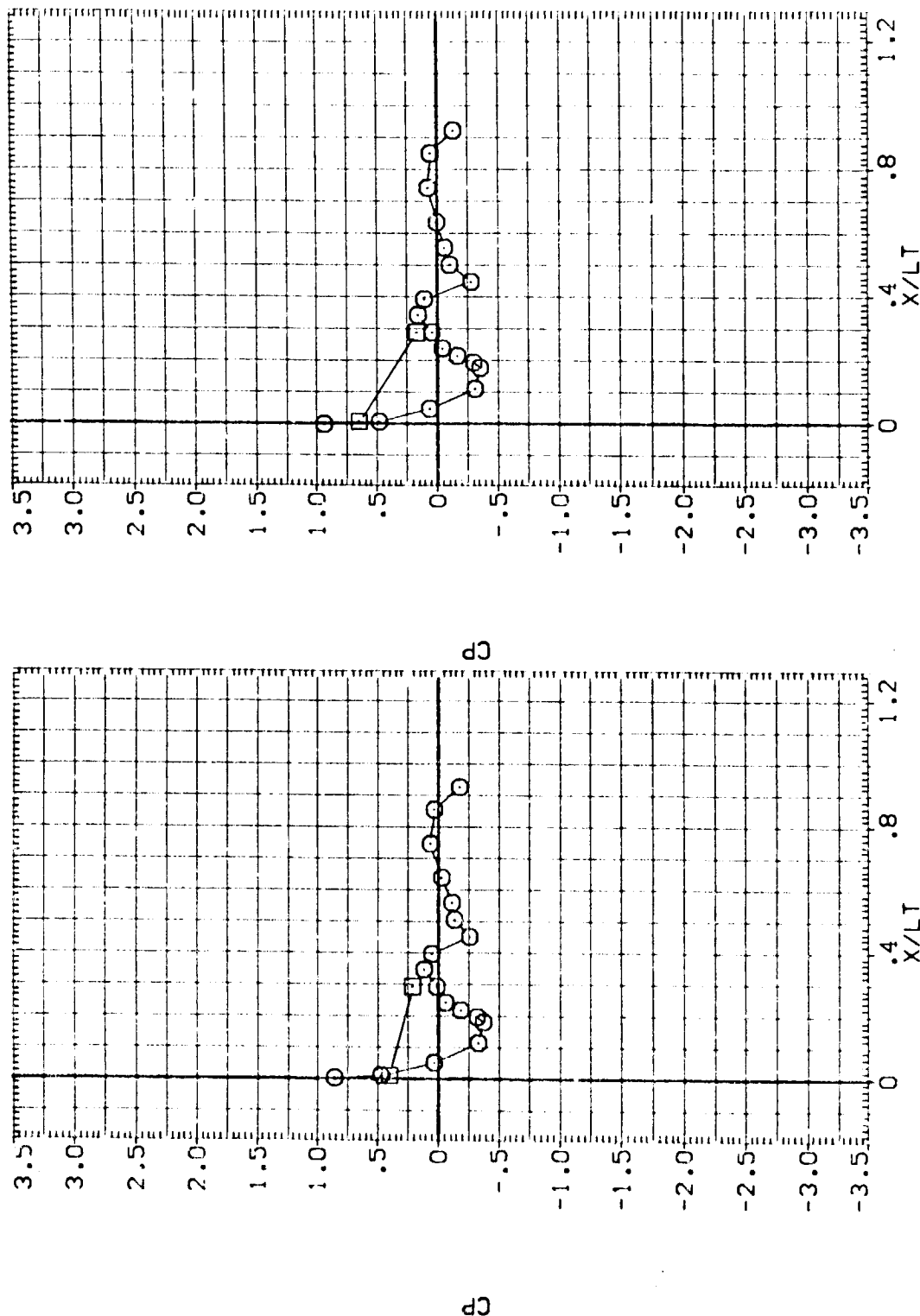


ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T34)

SYMBOL
 ○ □

PHI 180.000
 270.000
 BETAT -8.150
 .010
 ALPHAT 7.940

PARAMETRIC VALUES
 MACH .600
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:1-716 1A14 01+12+S12N25+AT11 EXTERNAL TANK (RB1134)

SYMBOL

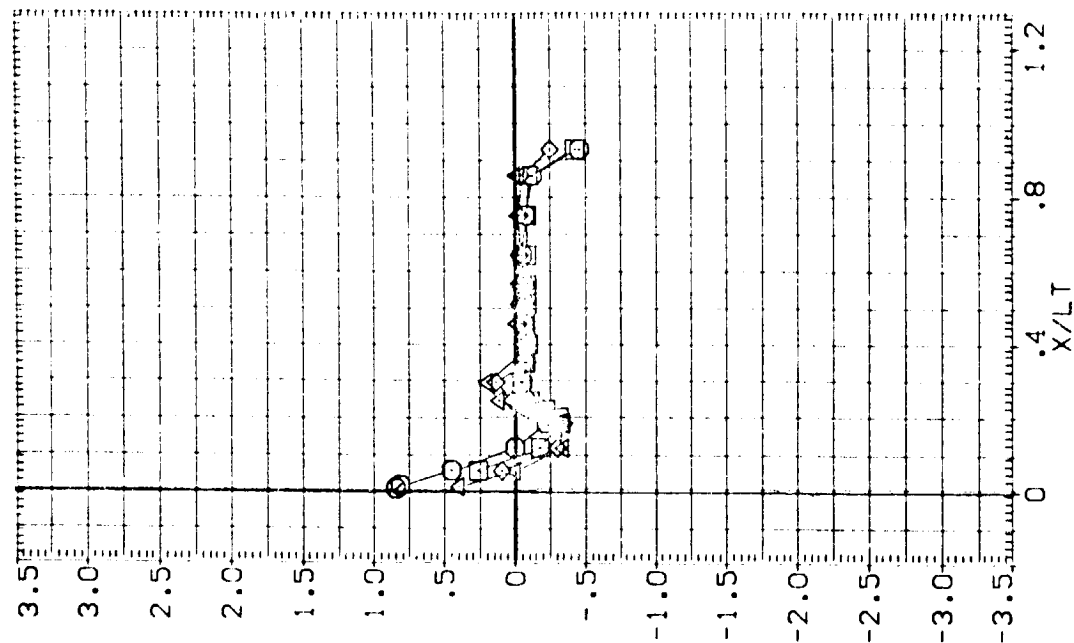
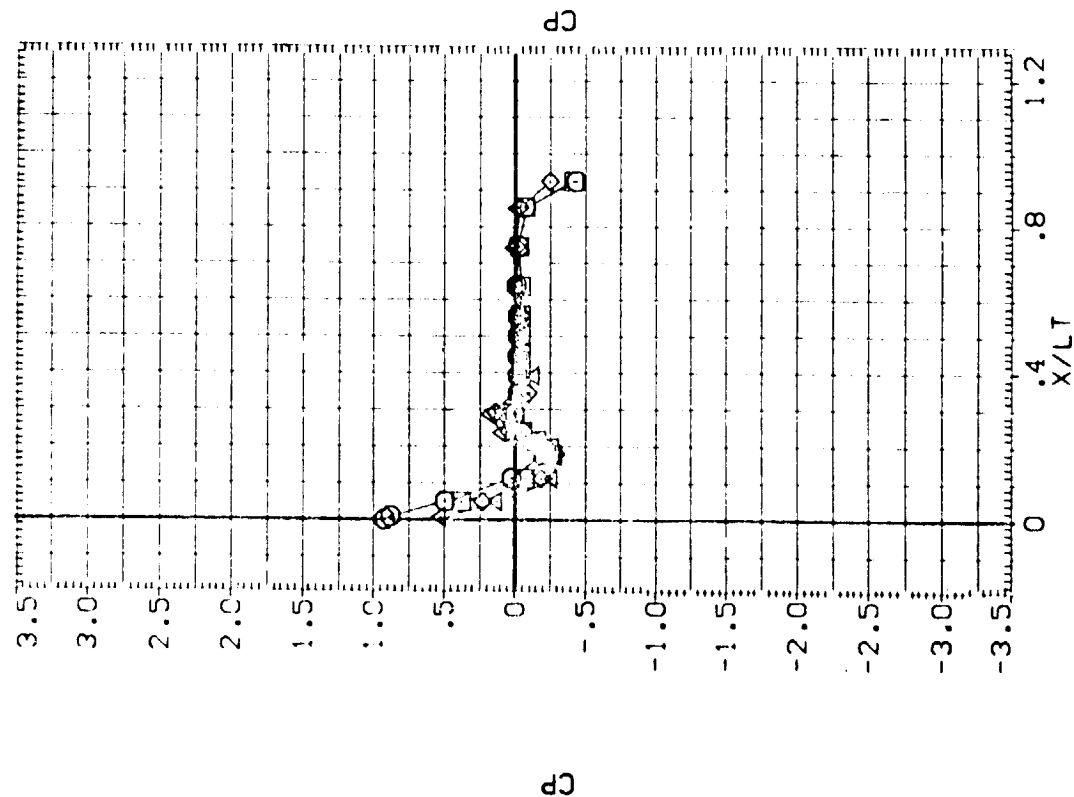
PHI .000
30.000
60.000
90.000

BETAT 4.120
8.240

ALPHAT 7.970

MACH .000
RUDDER .000

PARAMETRIC VALUES
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB134)

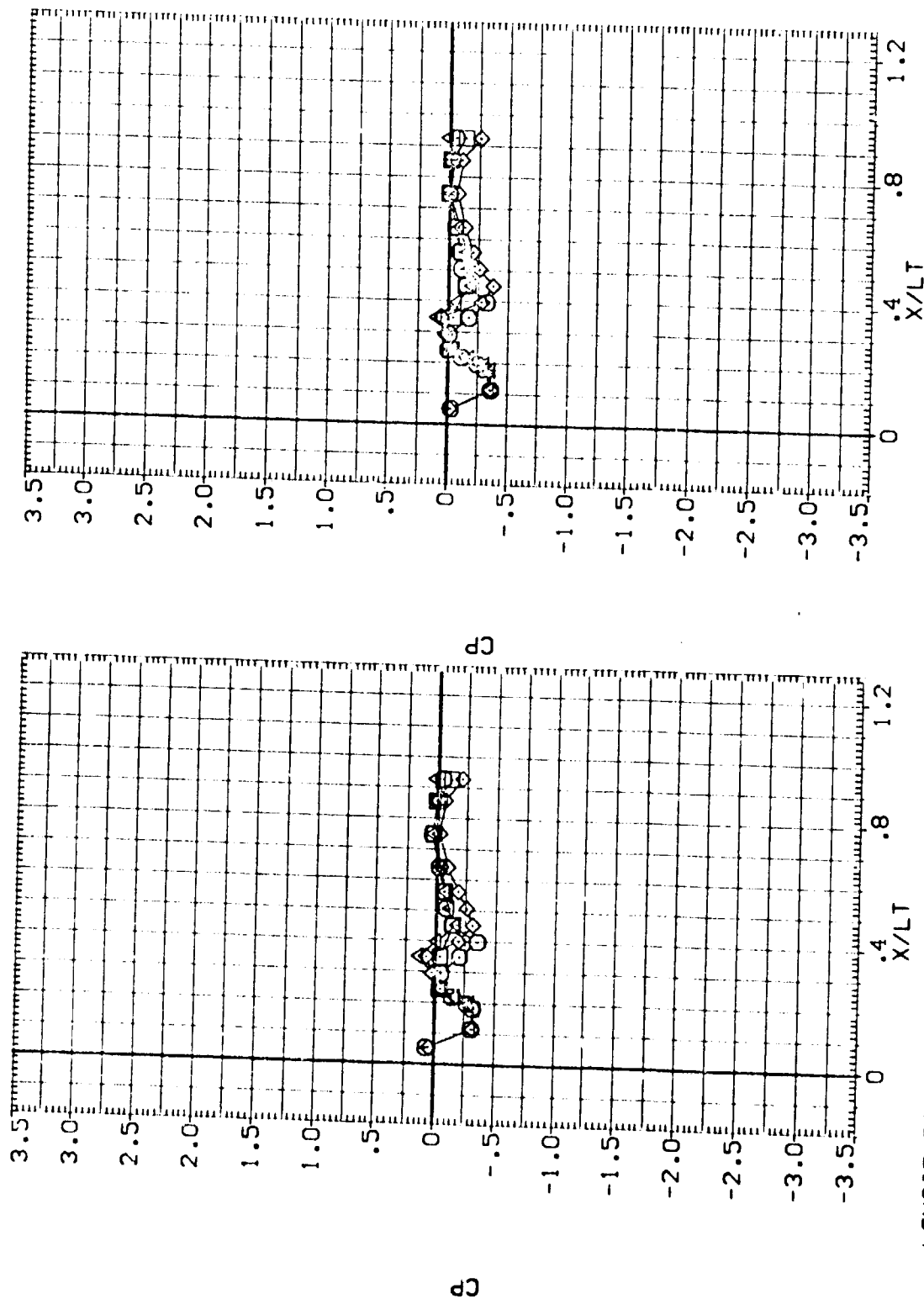
SYMBOL
 O □ ◇ △

PHI
 120.000
 135.000
 150.000
 165.000

BETAT
 4.120
 8.240

ALPHAT
 7.970

PARAMETRIC VALUES
 MACH .600
 RUDDER .000
 ELEVON .000
 SPOBRK .000



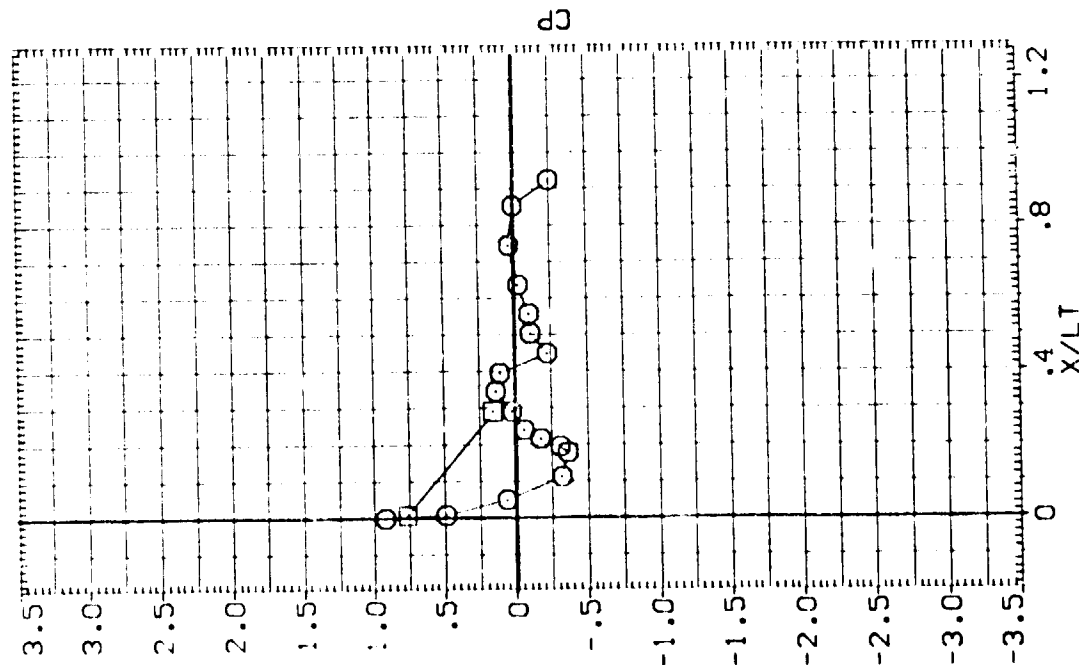
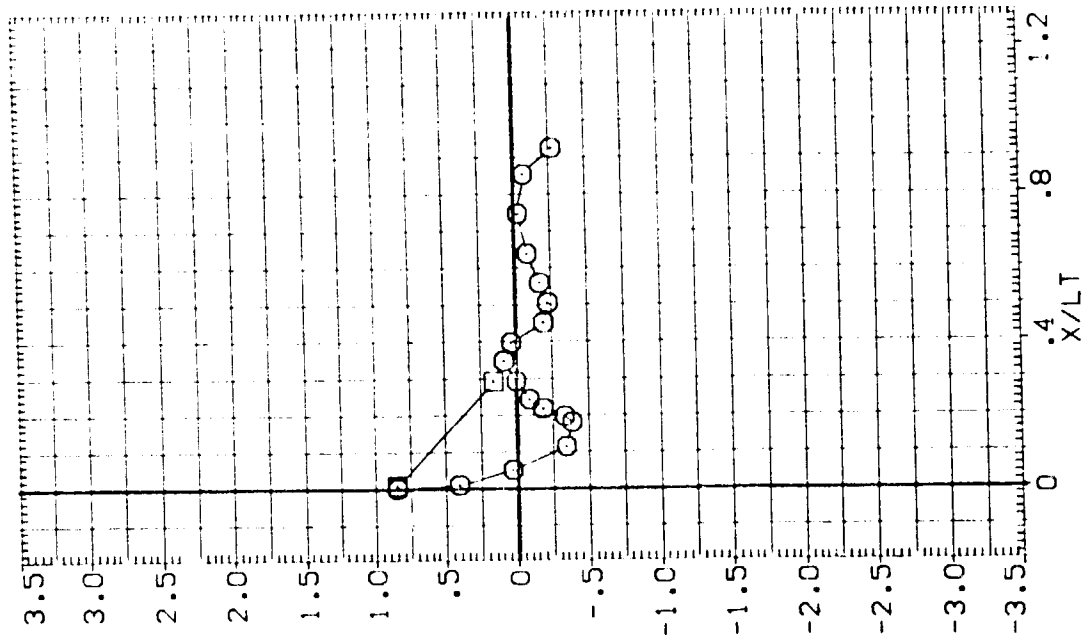
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T34)

PARAMETRIC VALUES
 .000 ELEVON
 .000 SPOILER
 .000

MACH
 RUDDER

PHI 180.000
 270.000
 BETAT 4.120
 8.240
 ALPHAT 7.970



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 EXTERNAL TANK (RB1T38)

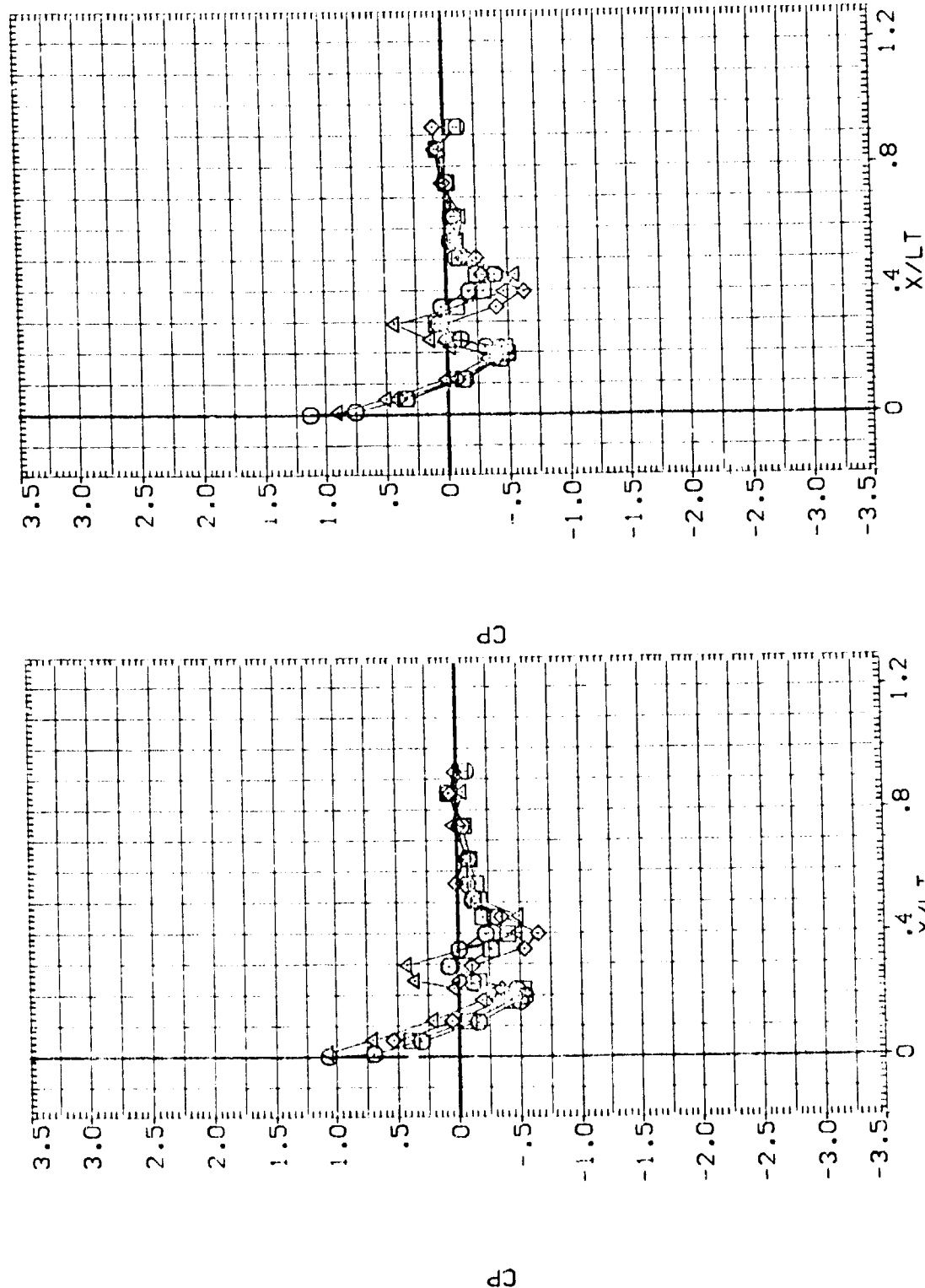
SYMBOL
 ○ □ ◇ △

PHI
 .000
 30.000
 60.000
 90.000

BETAT
 -8.150
 .000

ALPHAT
 -8.600

PARAMETRIC VALUES
 MACH
 RUDDER
 ELEVON
 SPOBRK
 .000
 .000
 .000
 .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

SYMBOL
 ○
 □
 ◇
 △

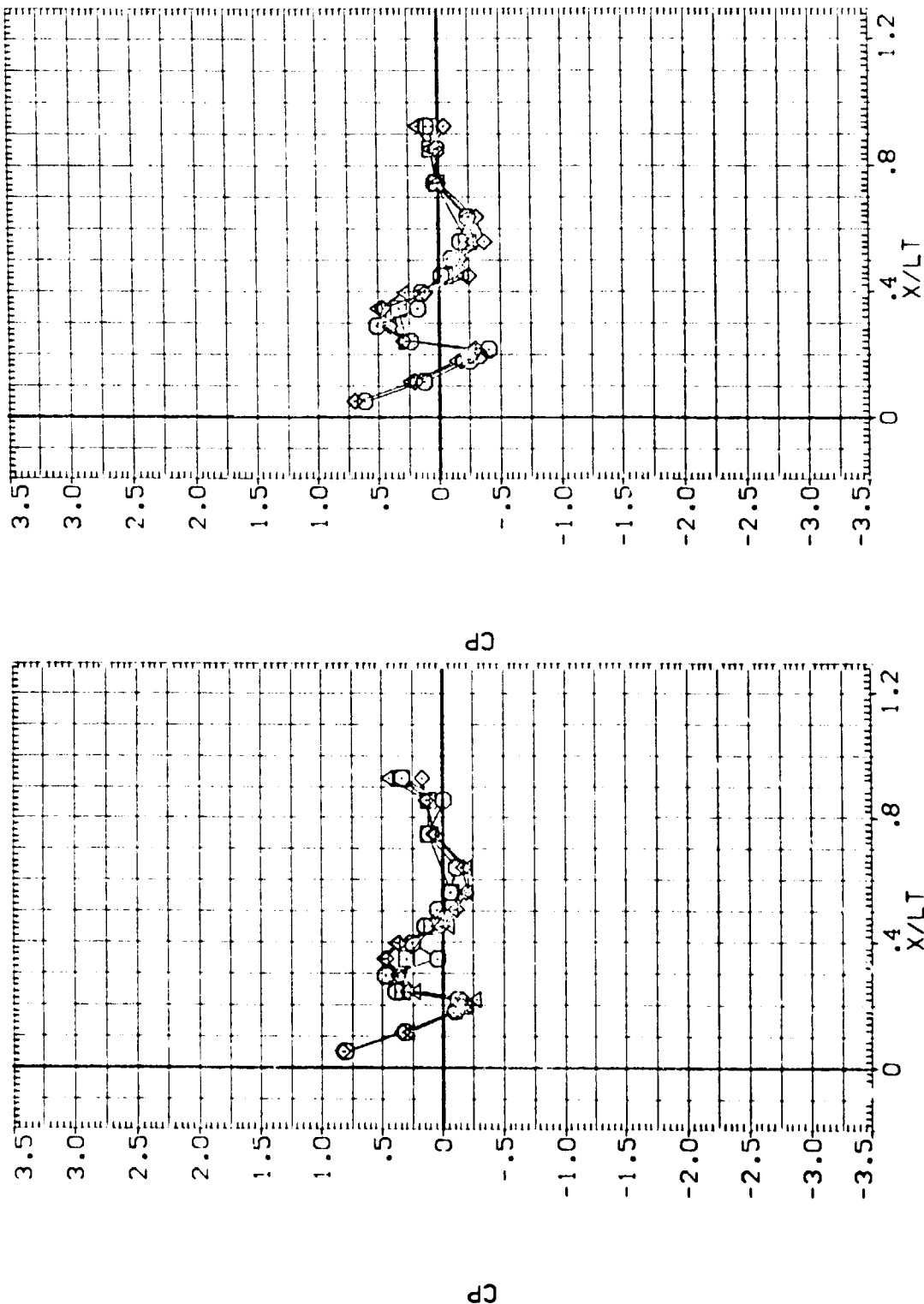
CHI 120.000
 135.000
 150.000
 165.000

BETAT -8.150
 .000

ALPHAT -8.600

MACH
 RUDDER

PARAMETRIC VALUES
 1.050 ELEVON
 .000 SPOBRK
 .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA:4 01:T:2+S12N25+AT11: EXTERNAL TANK (RB1T38)

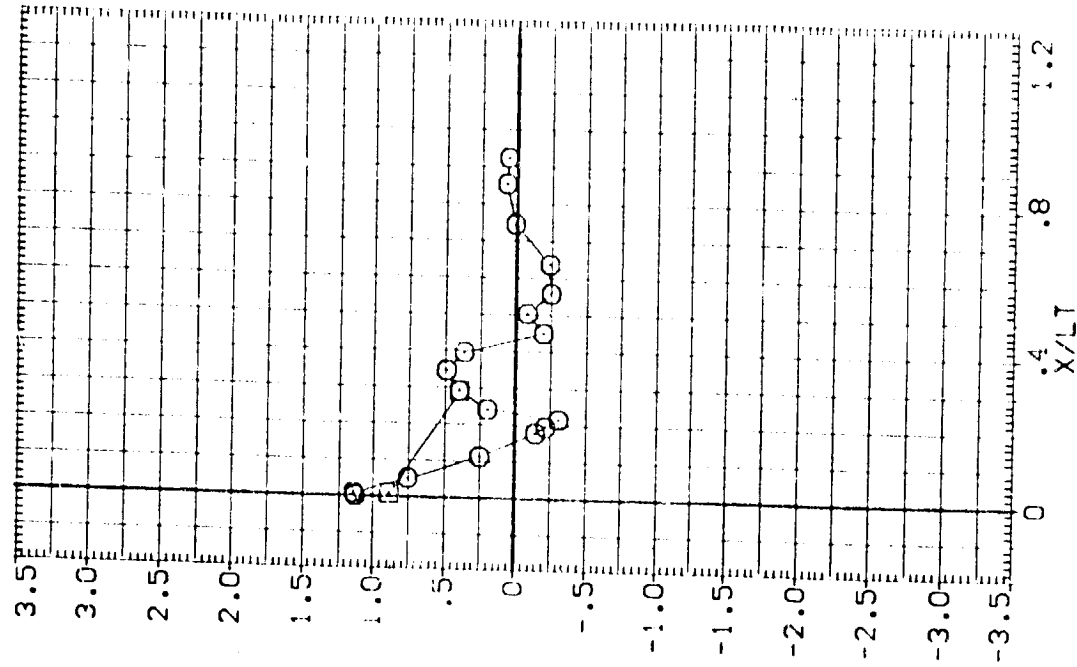
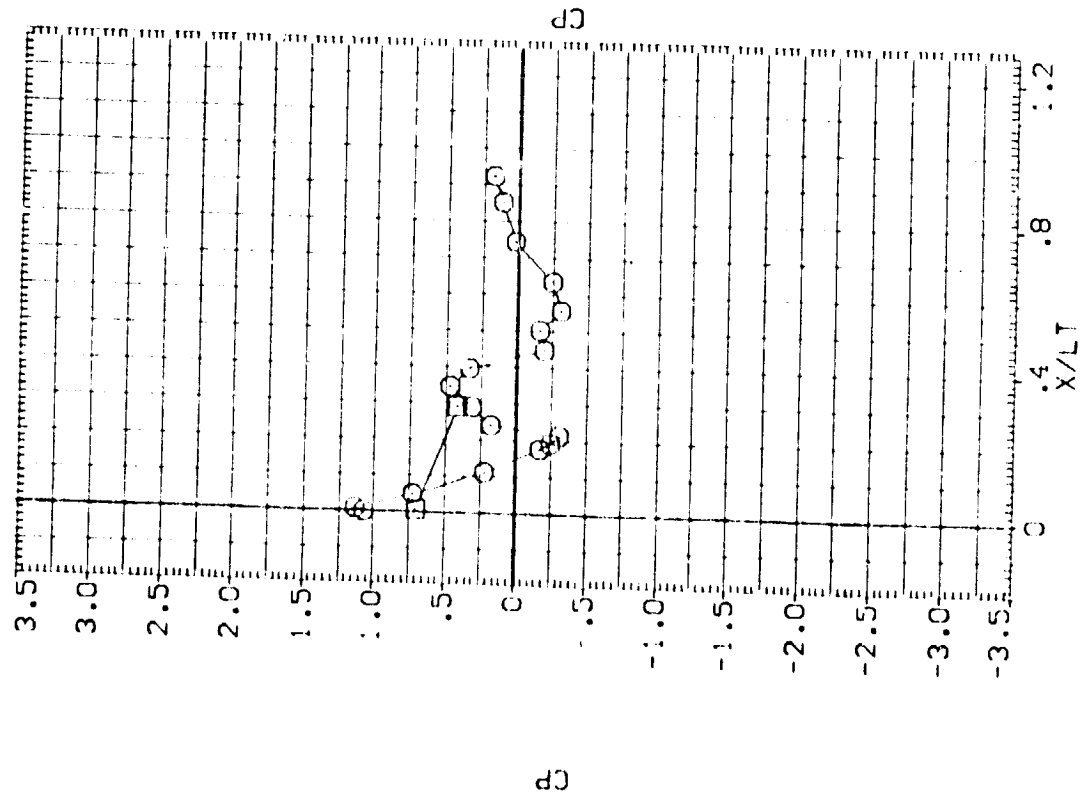
SYMBOL

PHI
180.000
270.000

BETAT
-8.150
.000

ALPHAT
-8.600

PARAMETRIC VALUES
MACH 1.050
RUDDER .000
ELEVON .000
SPDBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+I12+S12N25+AT11 EXTERNAL TANK (RB1138)

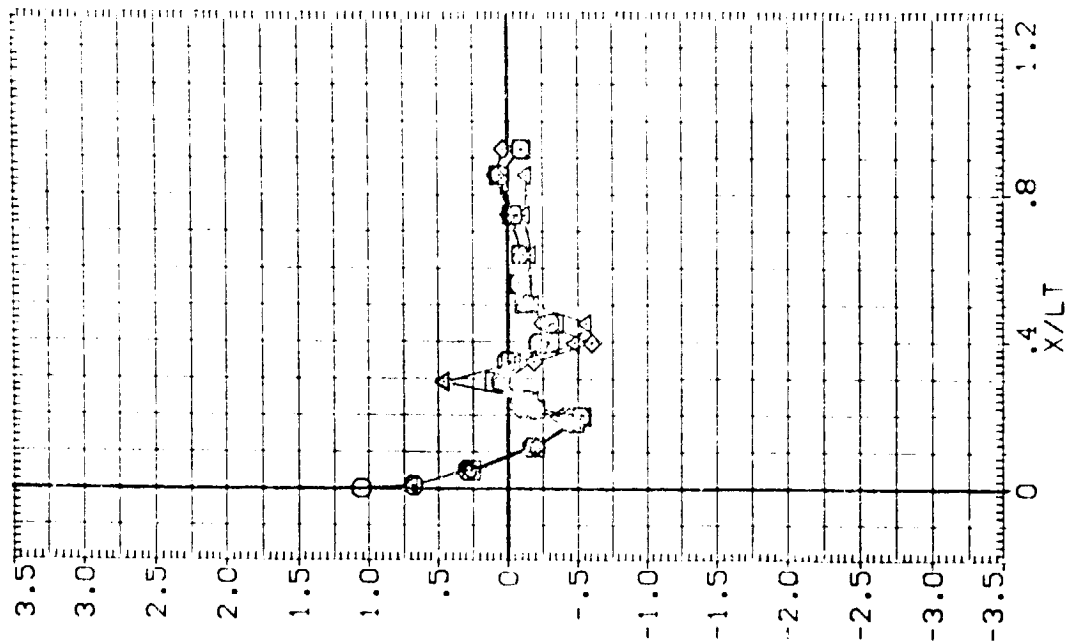
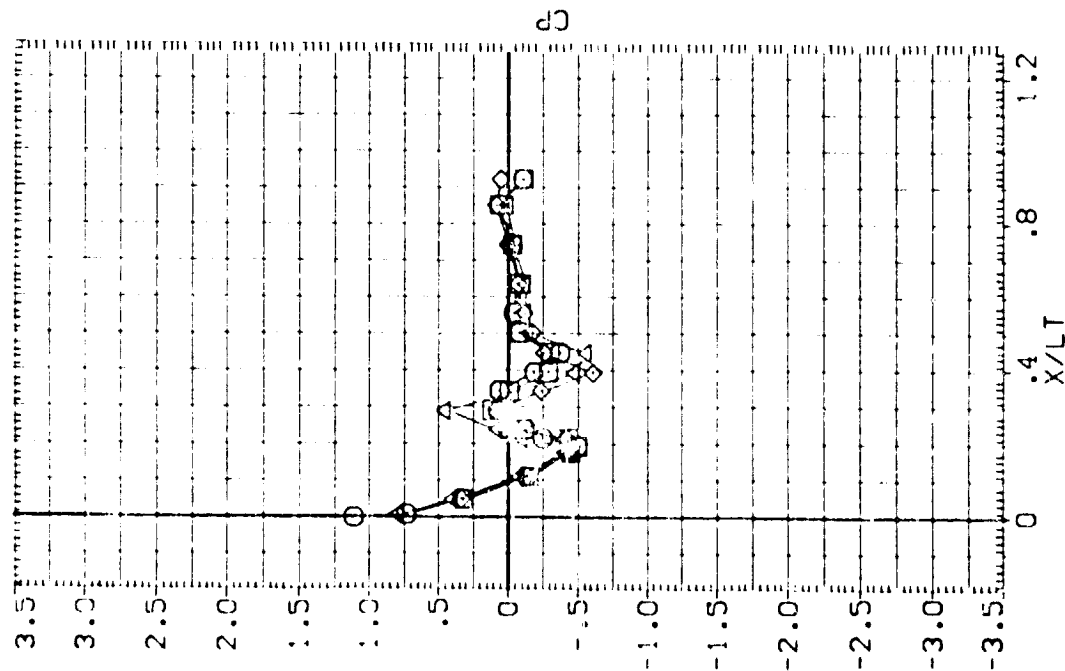
SYMBOL

PHI
0.000
30.000
60.000
90.000

BETAT
4.120
8.200

ALPHAT
-8.570

PARAMETRIC VALUES
MACH 1.050
RUDDER .000
ELEVON .000
SPDR .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 EXTERNAL TANK (RB1138)

SYMBOL

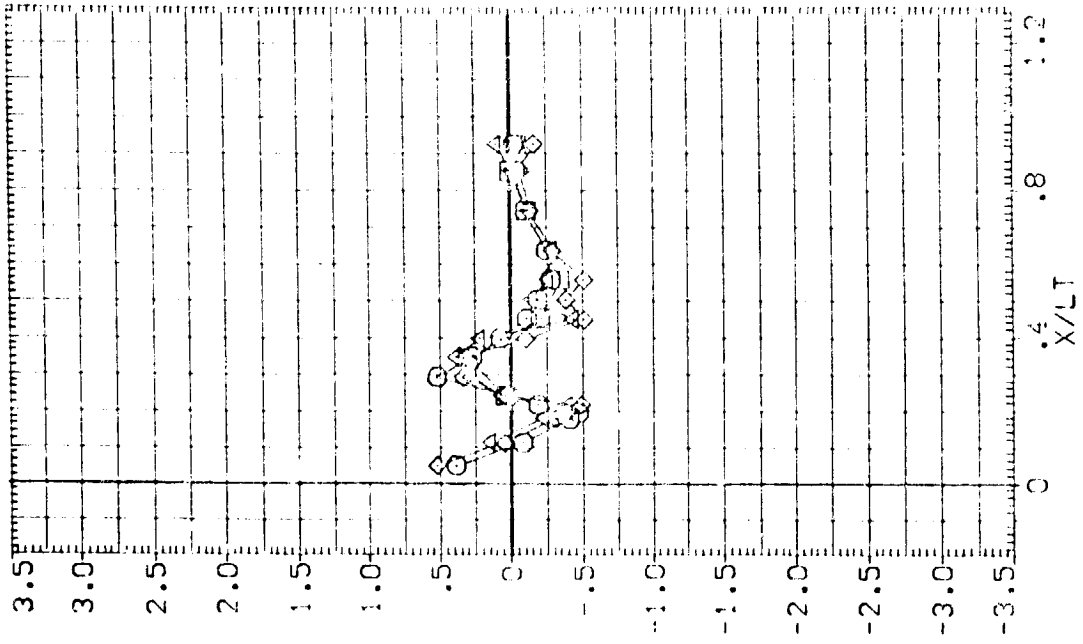
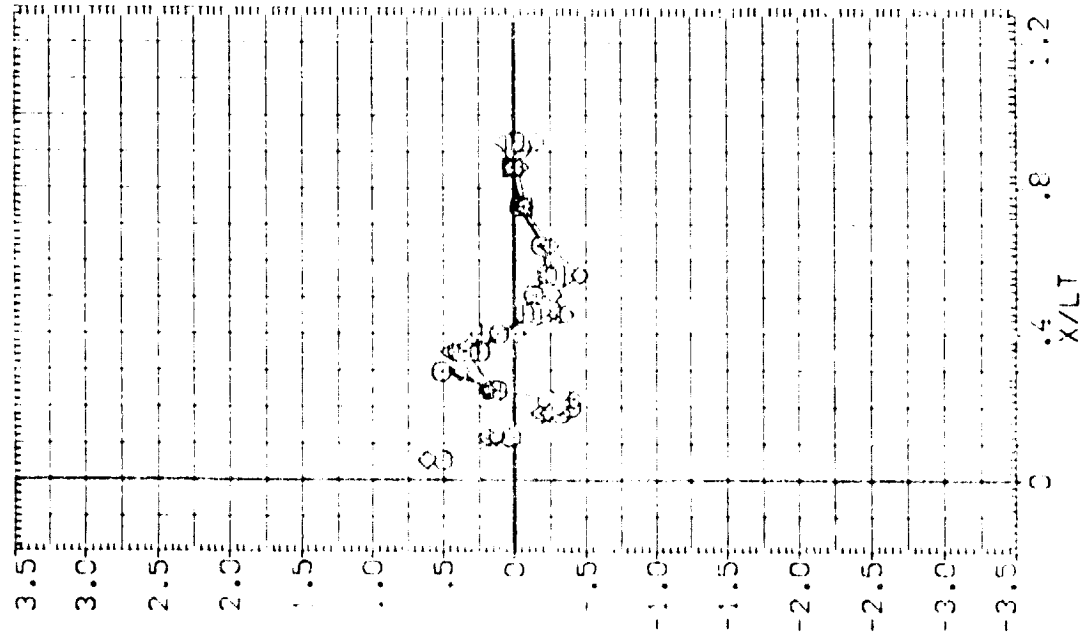
120.000
135.000
150.000
165.000

BETA 4.120
8.200

ALPHA -8.500

PARAMETRIC VALUES

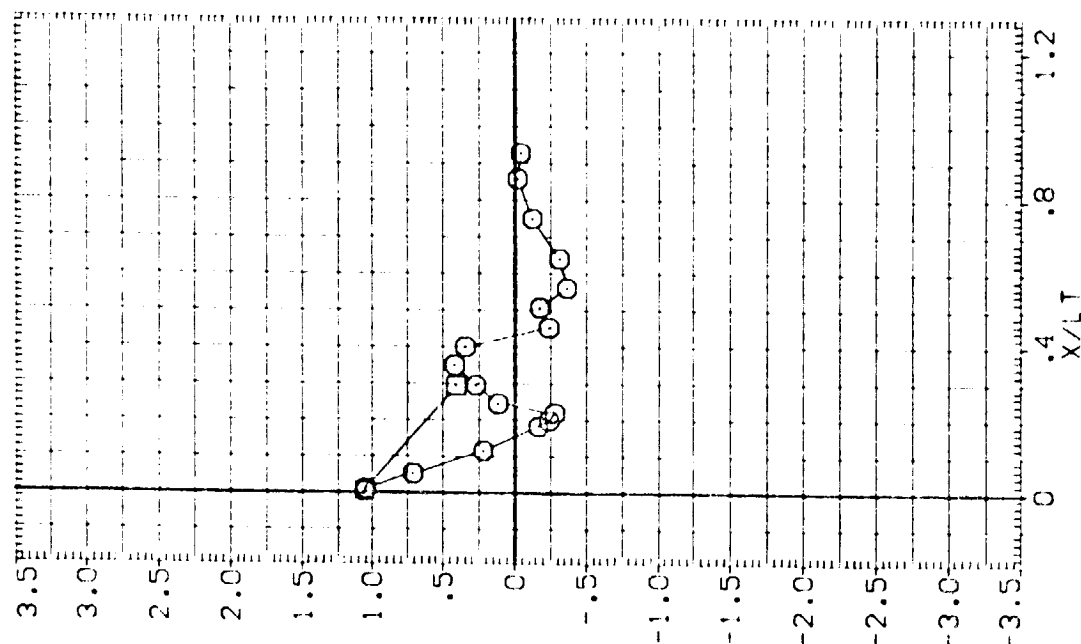
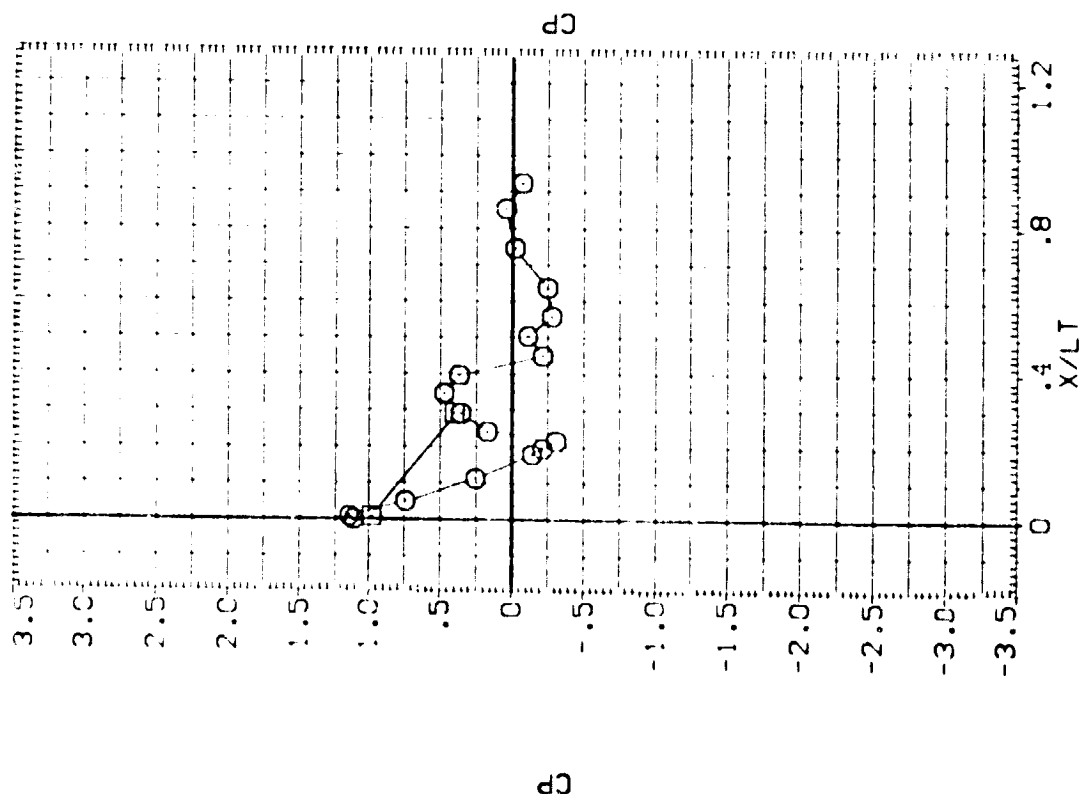
MACH 1.050
RUDDER .000
ELEVON .000
SPDBOX .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (R31T38)

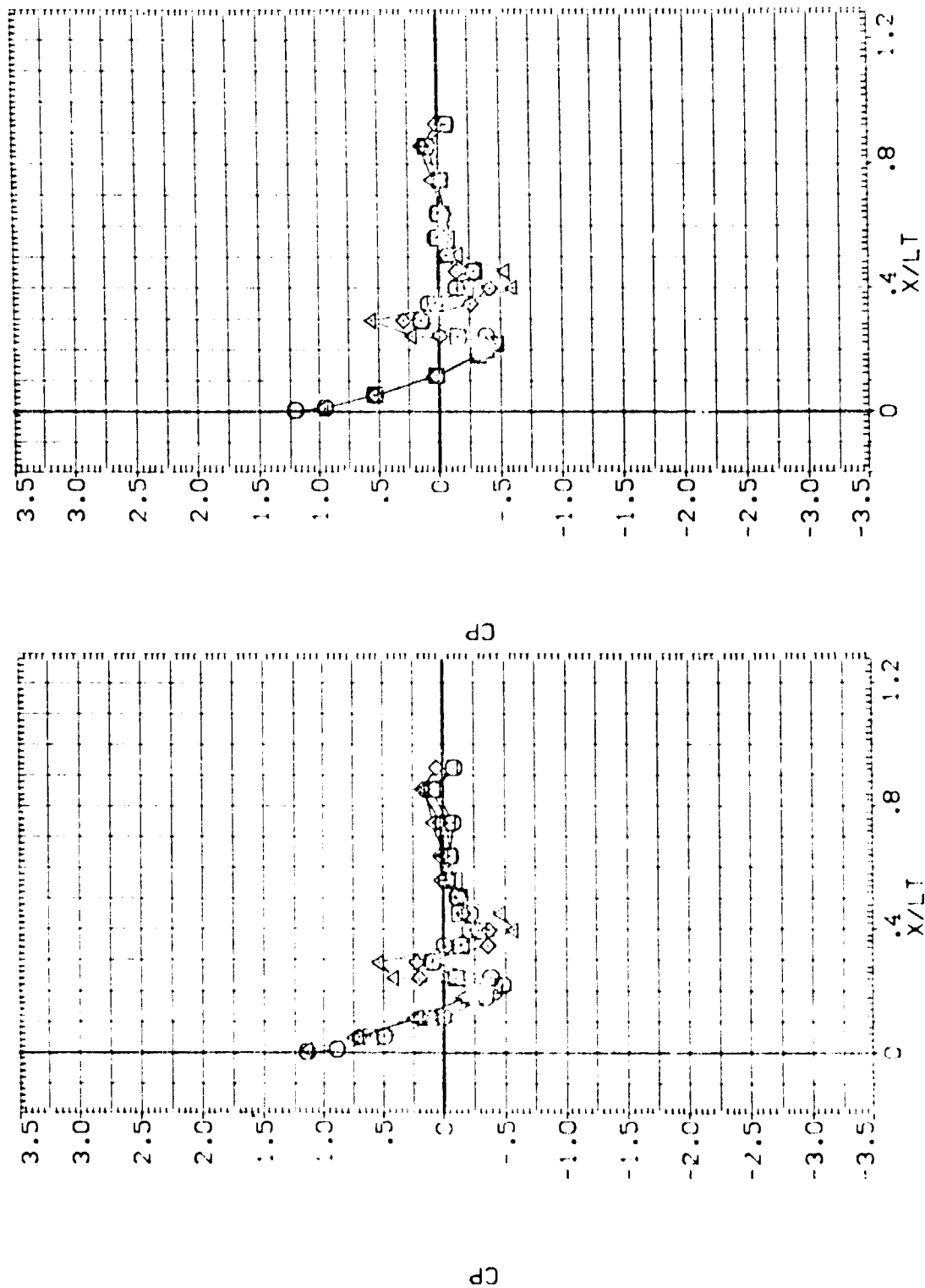
SYMBOL	PHI	BTAT	ALPHAT	MACH	PARAMETRIC VALUES
○	180.000	4.120	-8.570	RODIER	1.050 ELEVON
○	270.000	8.200			.000 SPGRK
					.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A:4 01+Y12+S 2N25+AT11 EXTERNAL TANK (R81T38)

SYMBOL	PHI	BETA	ALPHA	MACH	ELEVON	SPOR
○	.000	-8.170	-.540	.000	1.050	.000
□	30.000	.000		RUDER	.000	.000
◇	60.000					
△	90.000					



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

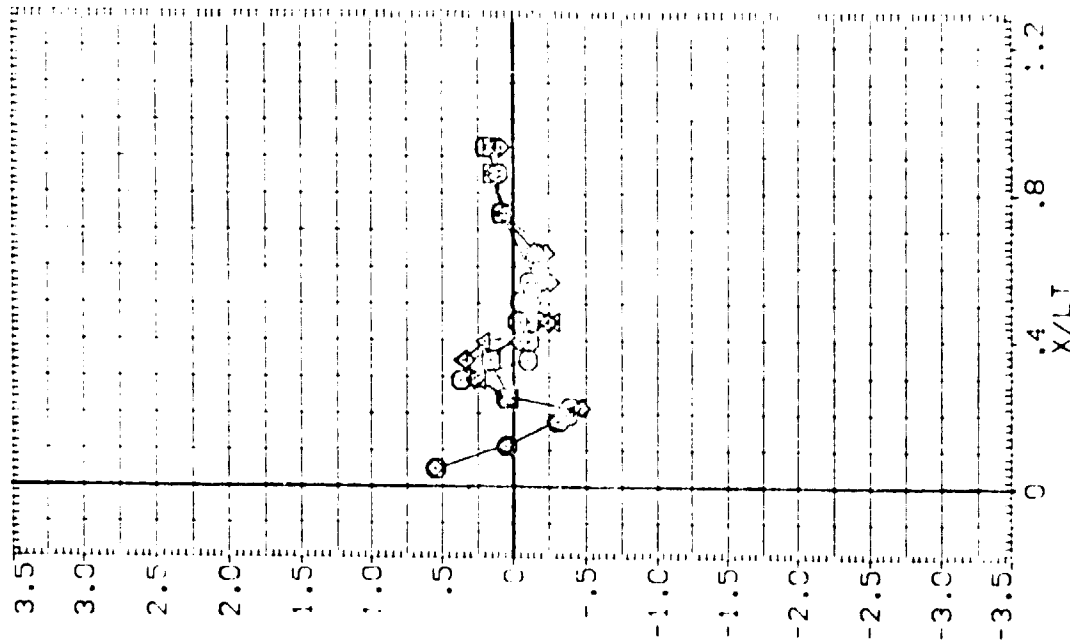
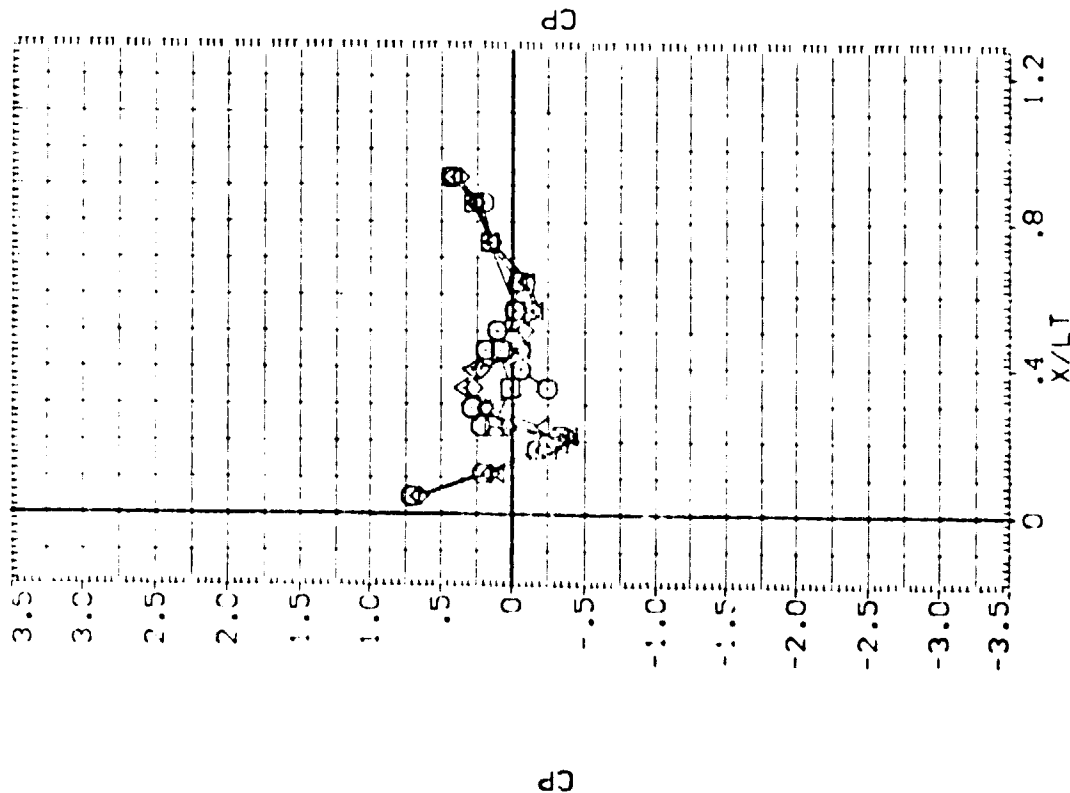
ARC11-016 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1138)

SYMBOL

PA1 BETAT ALPHAT
120.000 -8.170 -.540
135.000 .000
150.000
165.000

PARAMETRIC VALUES

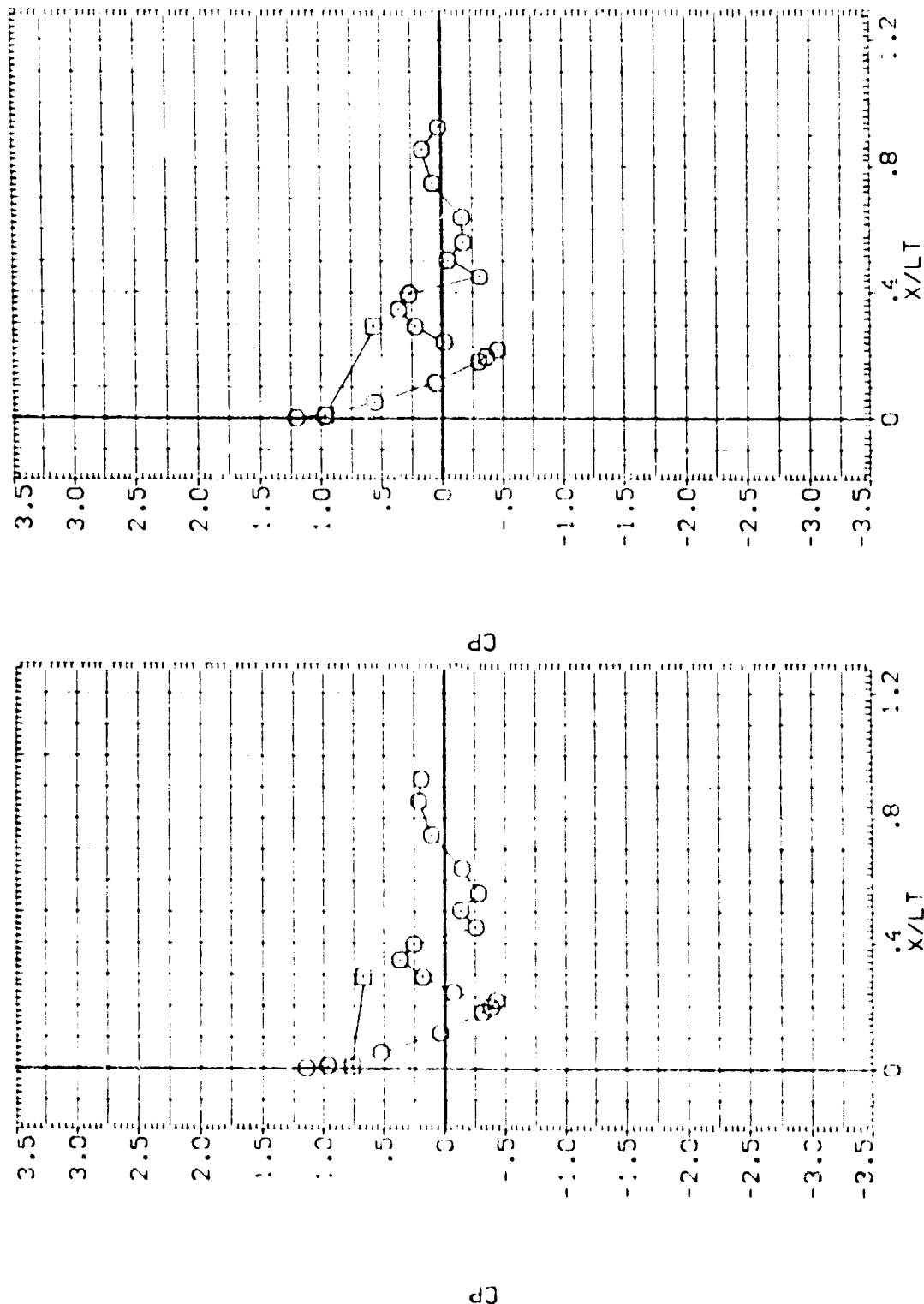
MACH 1.050 ELEVON .000
RUDDER .000 SPO38A .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:11-716 1A14 01+712+S12N25+AT11 EXTERNAL TANK (RB1T38)

SYMBOL	PHI	BETAT	ALPHA	MACH	ELEVON	SPOR
○	180.000	-8.170	-1.540	.000	.000	.000
□	270.000	.000		.000	.000	.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

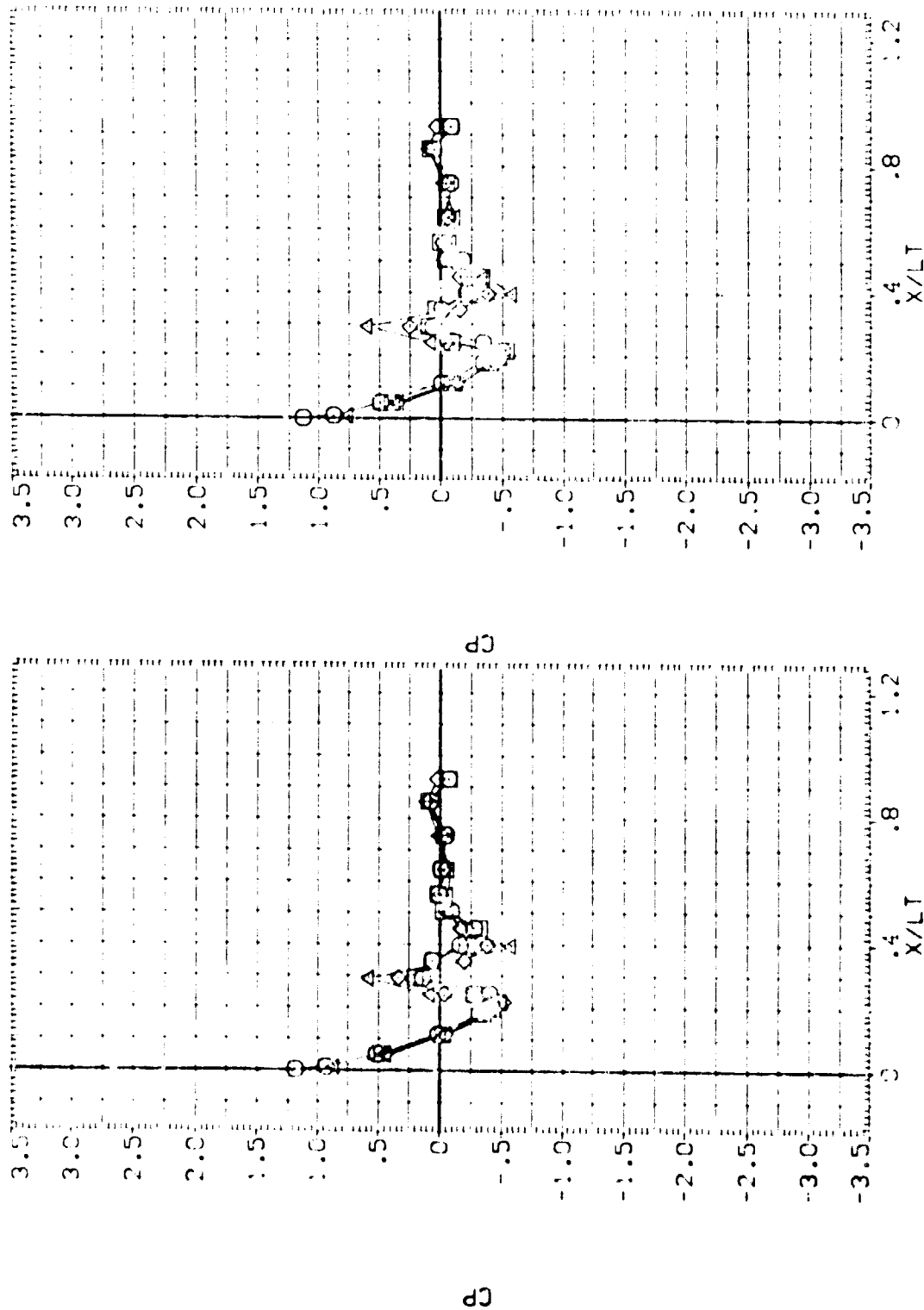
ARC11-716 1A14 01712+S12A25+AT1. EXTERNAL TANK (RB1738)

SYMBOL

0
30,000
60,000
90,000

BETAT ALPHAT
4.100 -1.520
8.180

PARAMETRIC VALUES
MACH 1.050 ELEVON .000
RUDER .000 SPDRON .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+712+S12N25+AT11 EXTERNAL TANK (RB1T38)

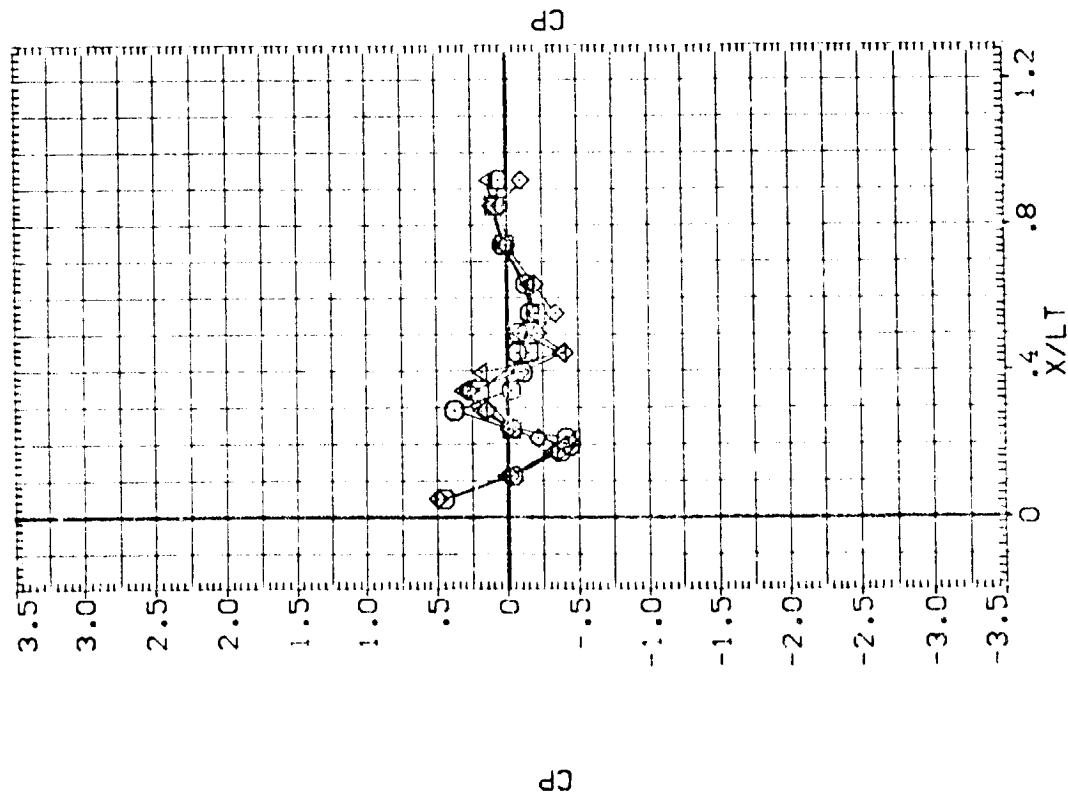
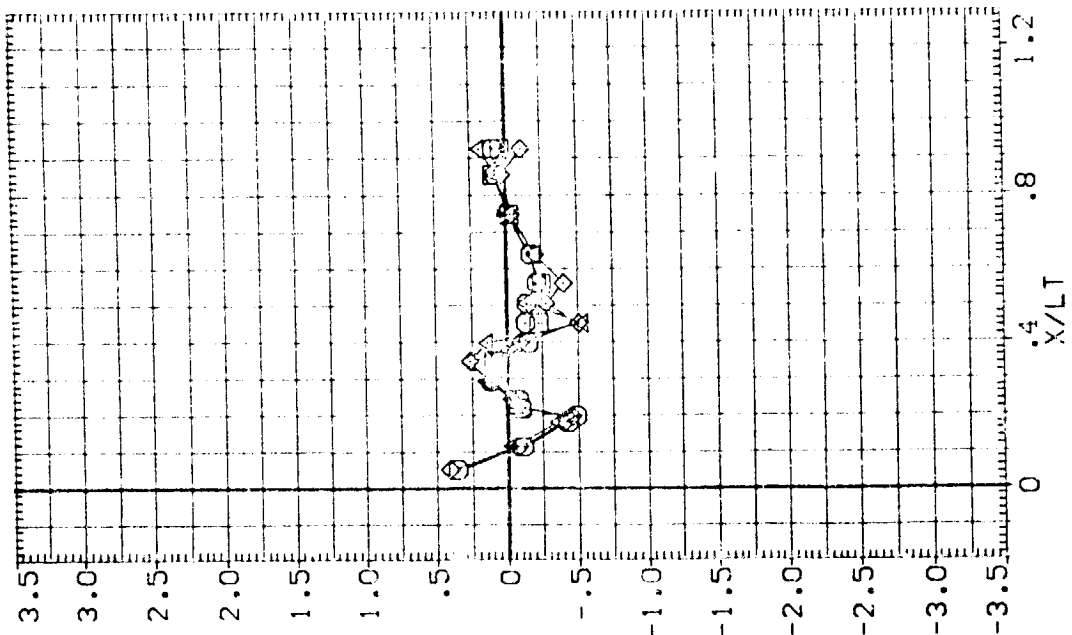
SYMBOL
○ □ ◇ △

PHI
120.000
135.000
150.000
165.000

BETAT
4.100
8.180

ALPHAT
-520

PARAMETRIC VALUES
MACH 1.050
RUDDER .000
ELEVON .000
SPCRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC1:-716 IA14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T38)

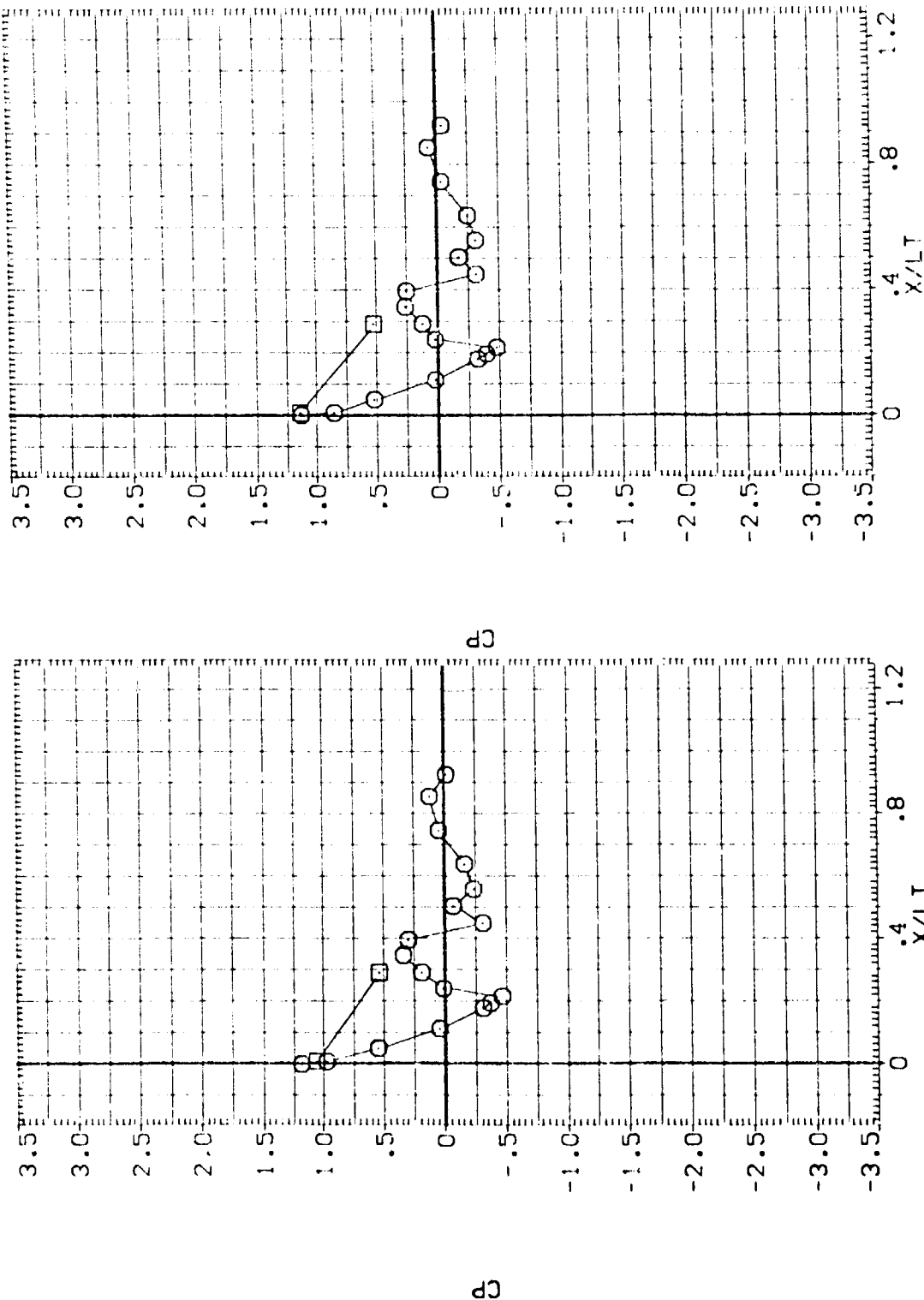
SYMBOL

PHI
180.000
270.000

BETAT
4.100
8.180

ALPHAT
-5.520

PARAMETRIC VALUES
MACH 1.050
ELEVON .000
SPDRX .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RBIT38)

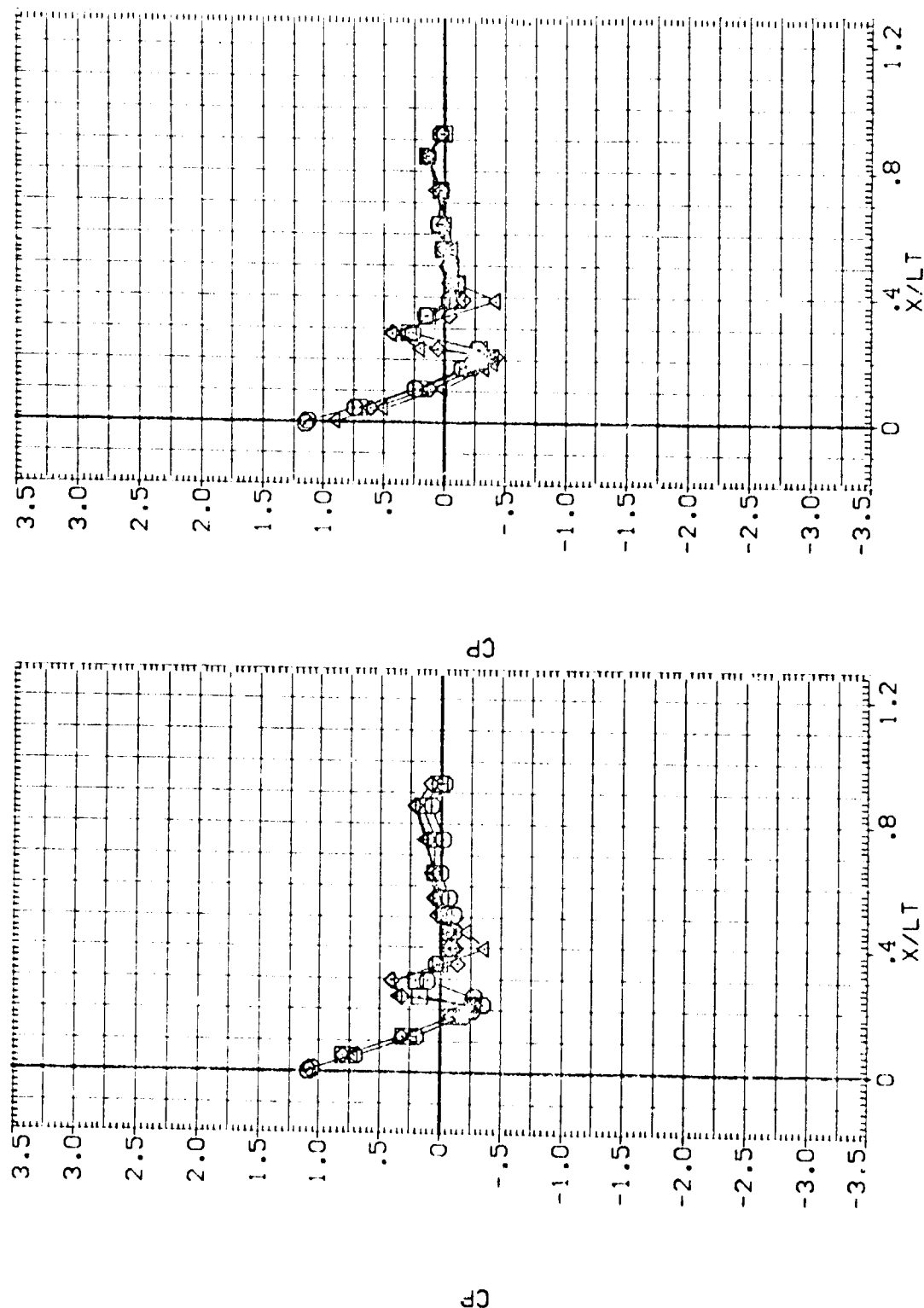
SYMBOL
 ○
 □
 ◇
 △

PHI .000
 30.000
 60.000
 90.000

BETAT
 -8.160
 .000

ALPHAT
 7.950

PARAMETRIC VALUES
 MACH 1.050
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11: EXTERNAL TANK (RB1138)

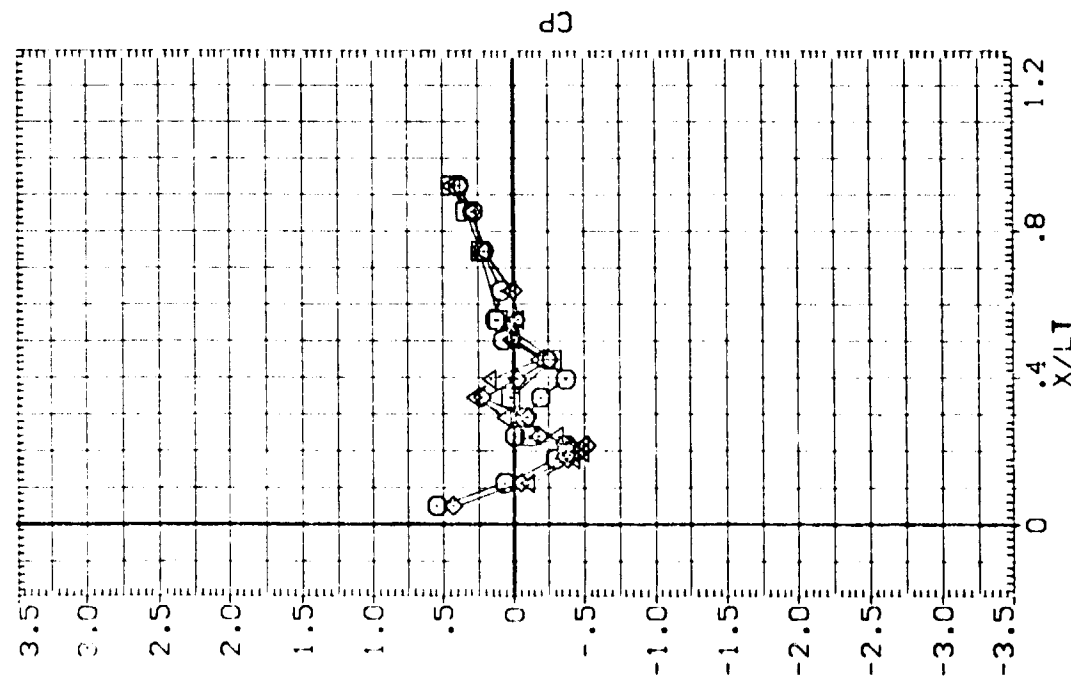
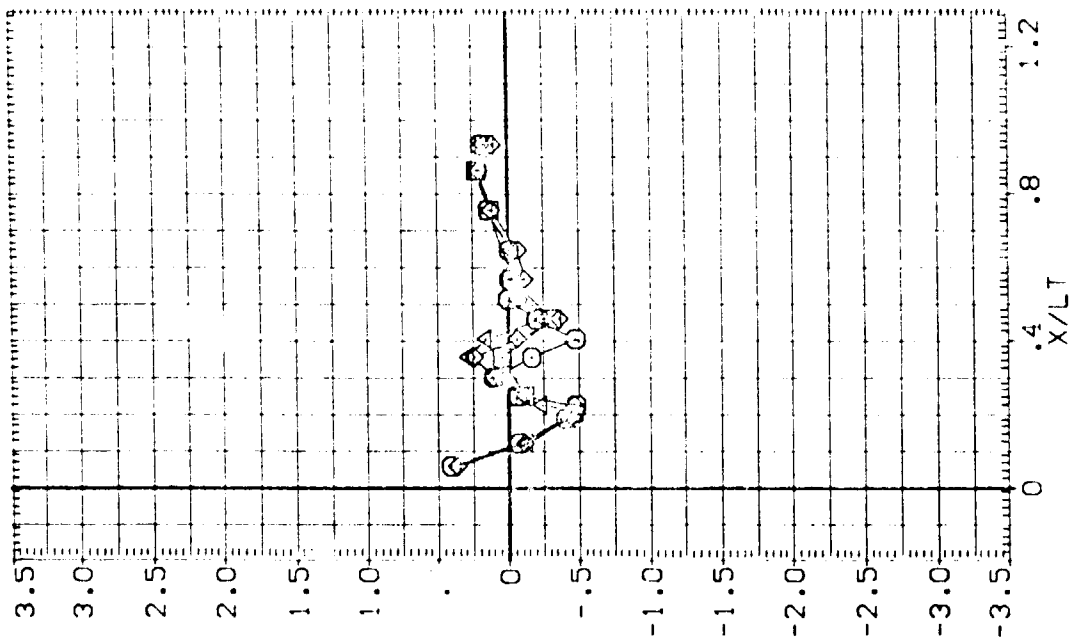
SYMBOL

PHI
120.000
135.000
150.000
165.000

BETAT
-8.160
.000

ALPHAT
7.950

PARAMETRIC VALUES
MACH 1.050
ELEVON .000
RUDDER .000
SPCORK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T38)

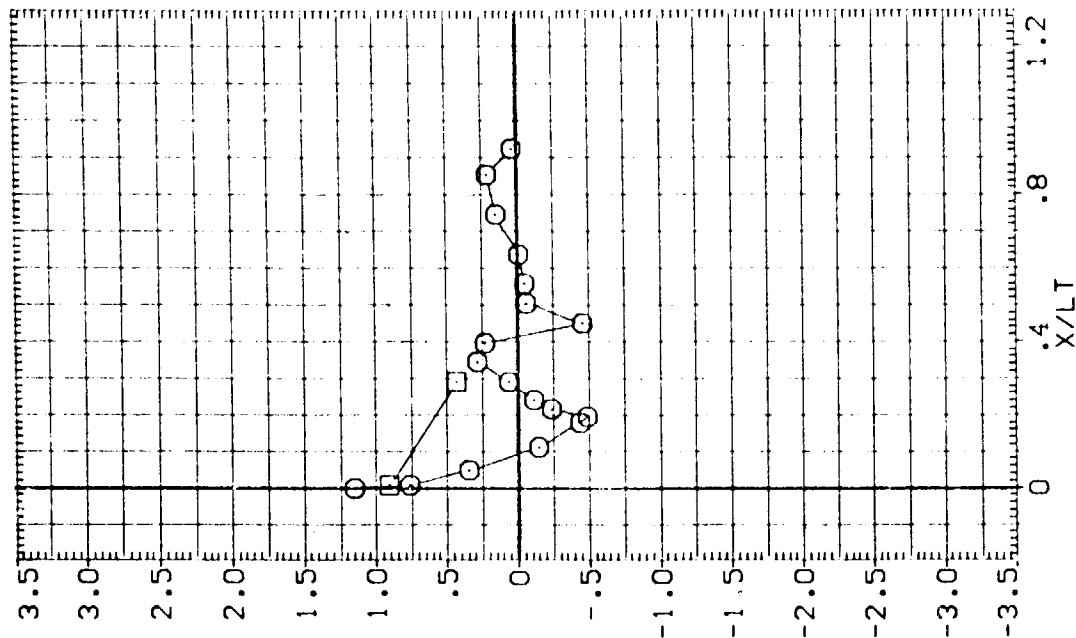
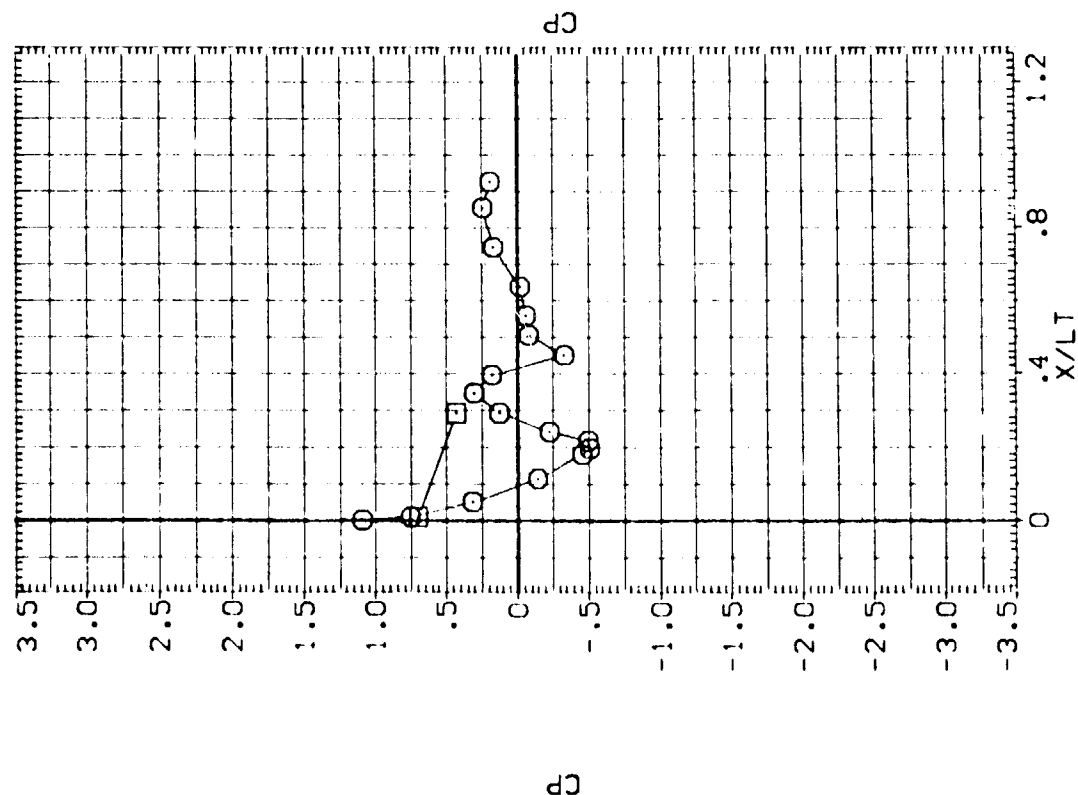
SYMBOL

PHI
180.000
270.000

BETAT
-8.160
.000

ALPHAT
7.950

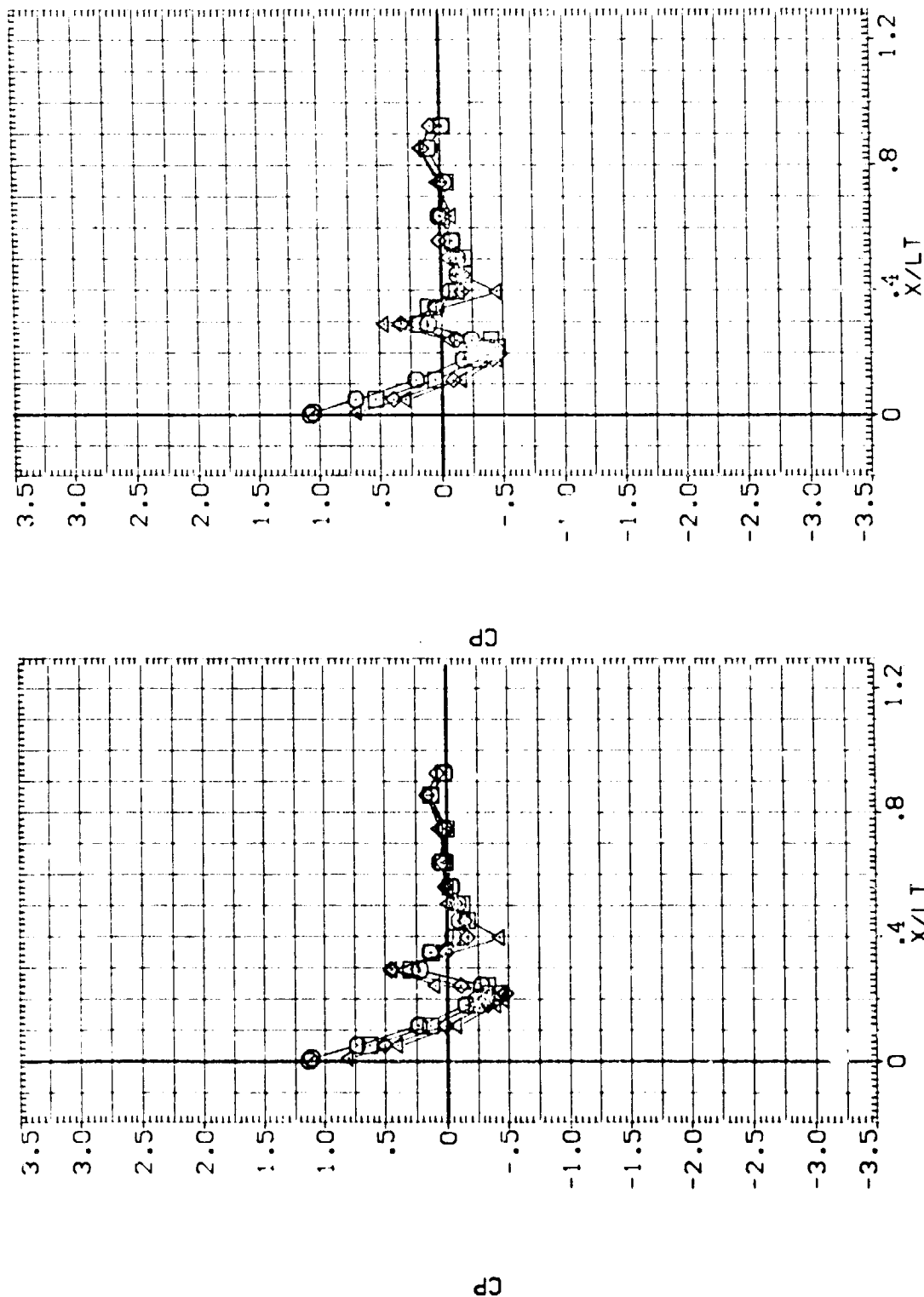
PARAMETRIC VALUES
MACH 1.050
RUDDER .000
ELEVCN .000
SPDRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01-T12+S12N25+AT11 EXTERNAL TANK (R81T38)

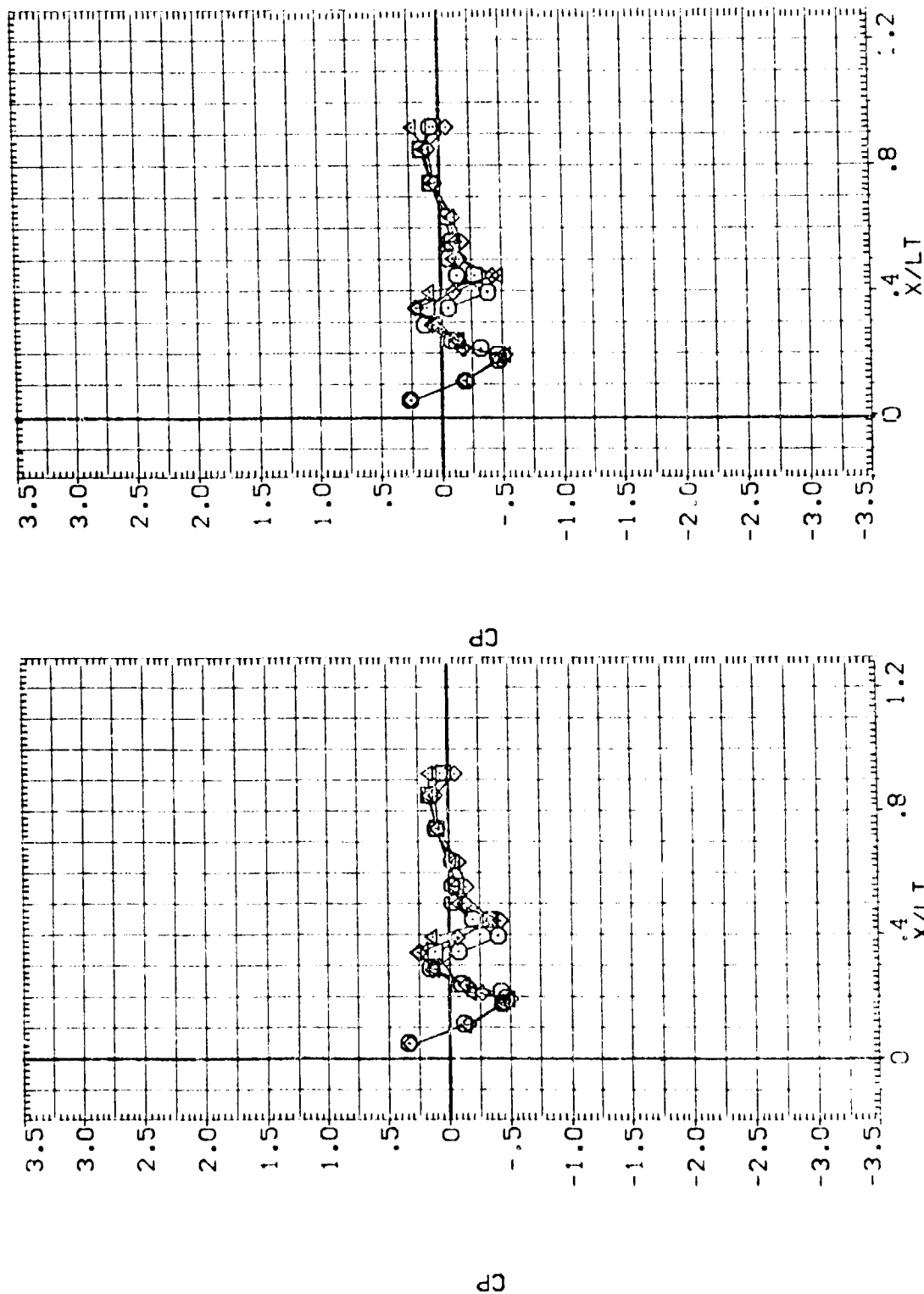
SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
				MACH	ELEVON	SPOBRK
○	.000	4.130	8.000	.000	.000	.000
◇	30.000	8.300				
△	60.000					
▽	90.000					



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 EXTERNAL TANK (RB1T38)

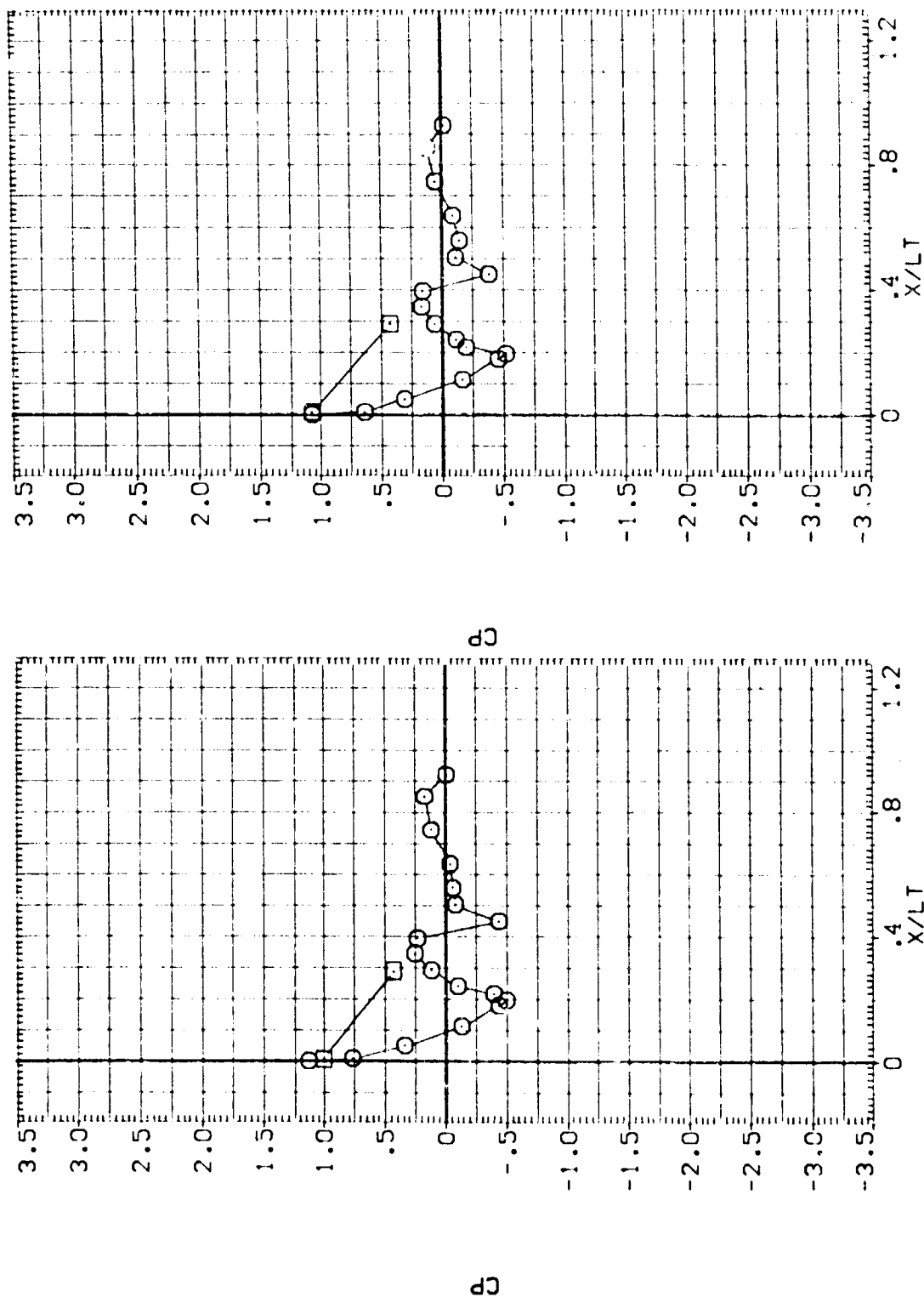
SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
				MACH	ELEVON	SPDRK
○	120.000	4.130	8.000	1.050	.000	.000
□	135.000	8.300		.000	.000	
◇	150.000					
△	165.000					



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T38)

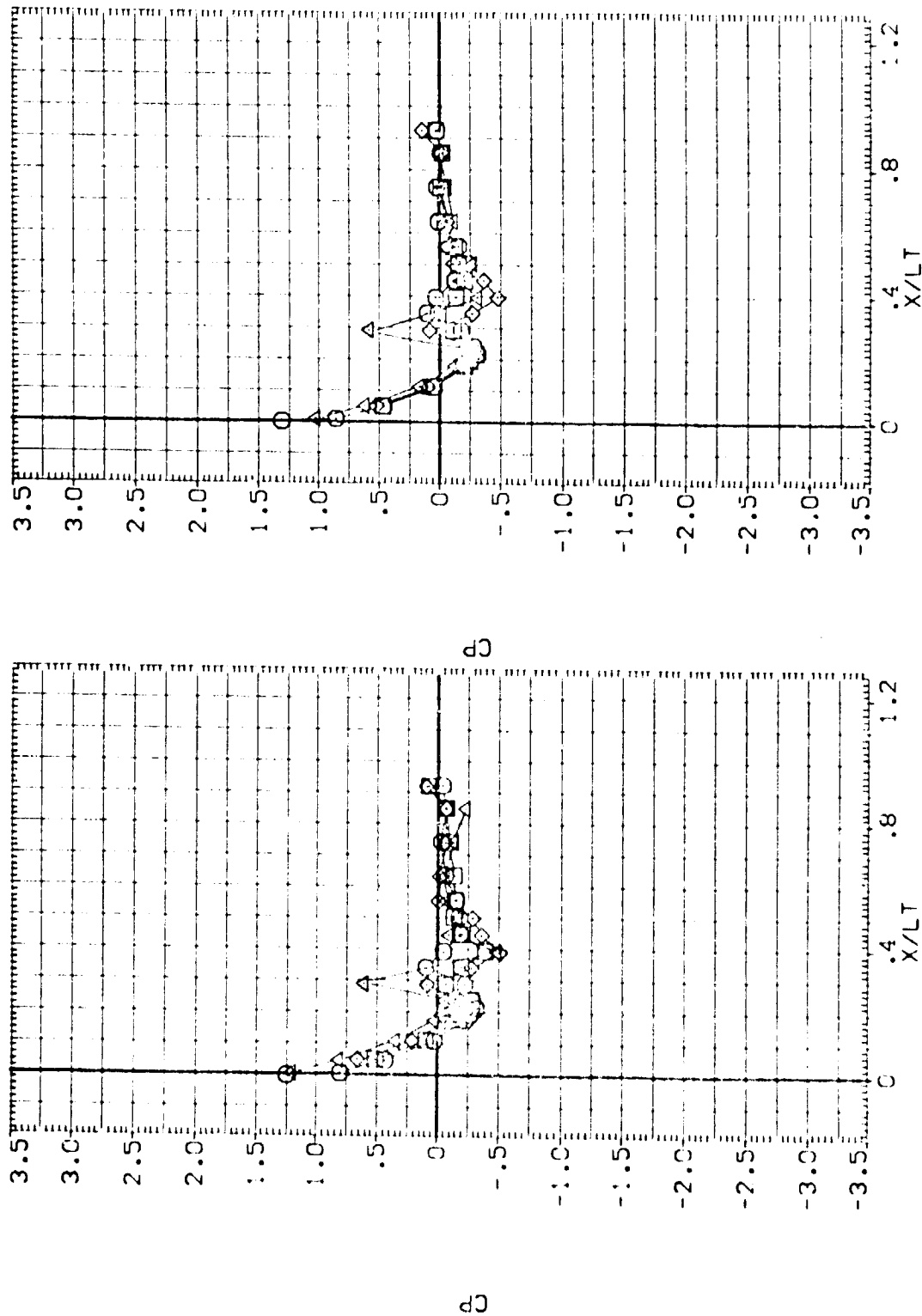
SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES	
○	180.000	4.130	8.000	MACH	1.050
□	270.000	8.300		RUDDER	.000
				ELEVON	.000
				SPDRK	.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
				MACH	ELEVON	
○	.000	-8.190	-8.470	.000	.000	.000
□	30.000	.000		RUDER	SPDRK	.000
△	50.000					
△	90.000					



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

SYMBOL
 O
 □
 ◇
 △

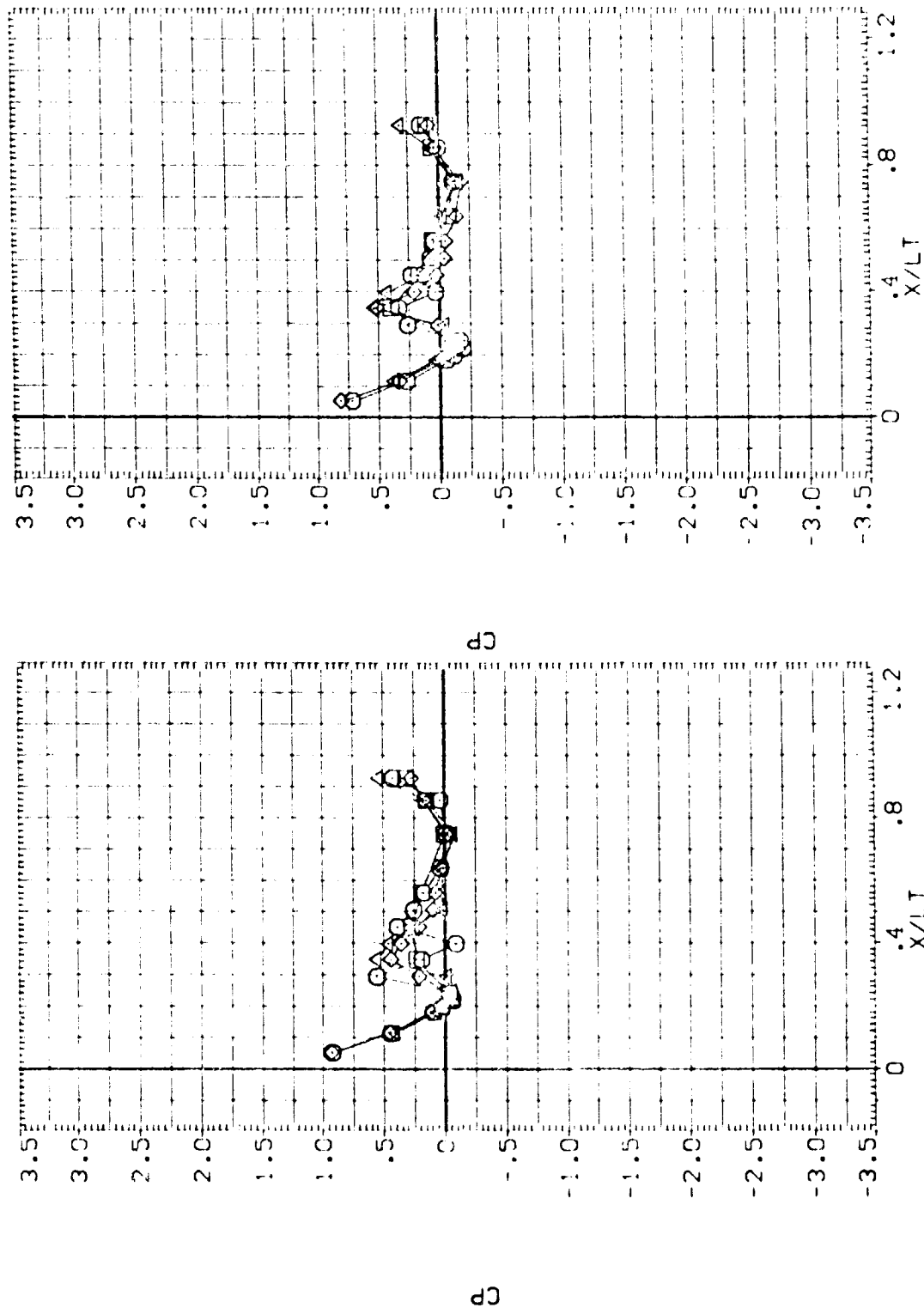
PHI
 120.000
 135.000
 150.000
 165.000

BETAT
 -8.190
 .000

ALPHAT
 -8.470

MACH
 RUDDER

PARAMETRIC VALUES
 1.400
 .000
 ELEVON
 .000
 SPOBRK
 .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

SYMBOL

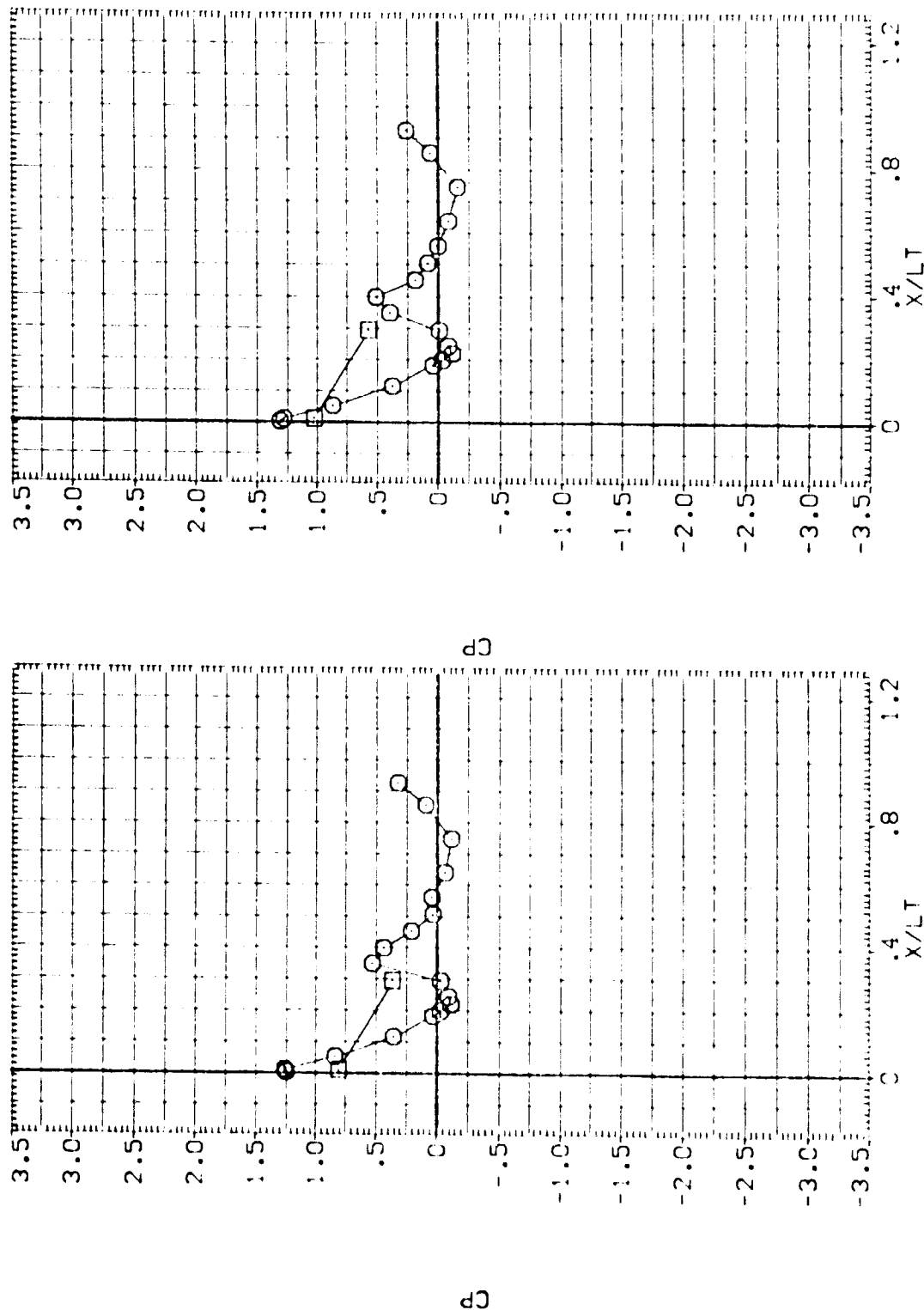
PHI 180.000
270.000

BETAT -8.190
.000

ALPHA-T -8.470

MACH 1.400
RUDDER .000

PARAMETRIC VALUES
ELEVON .000
SPDRK .000



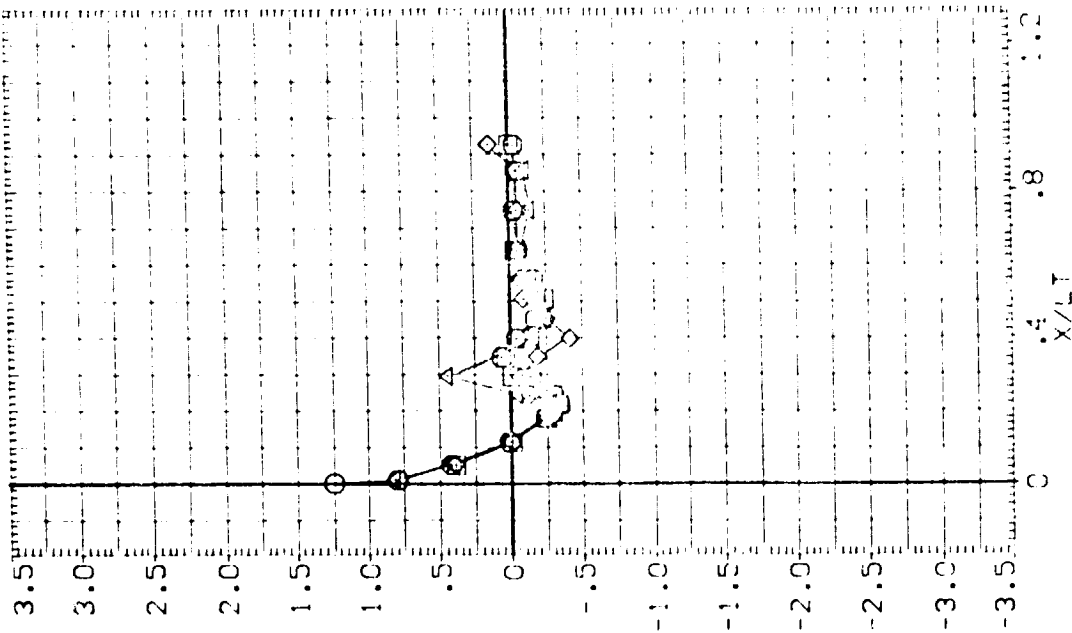
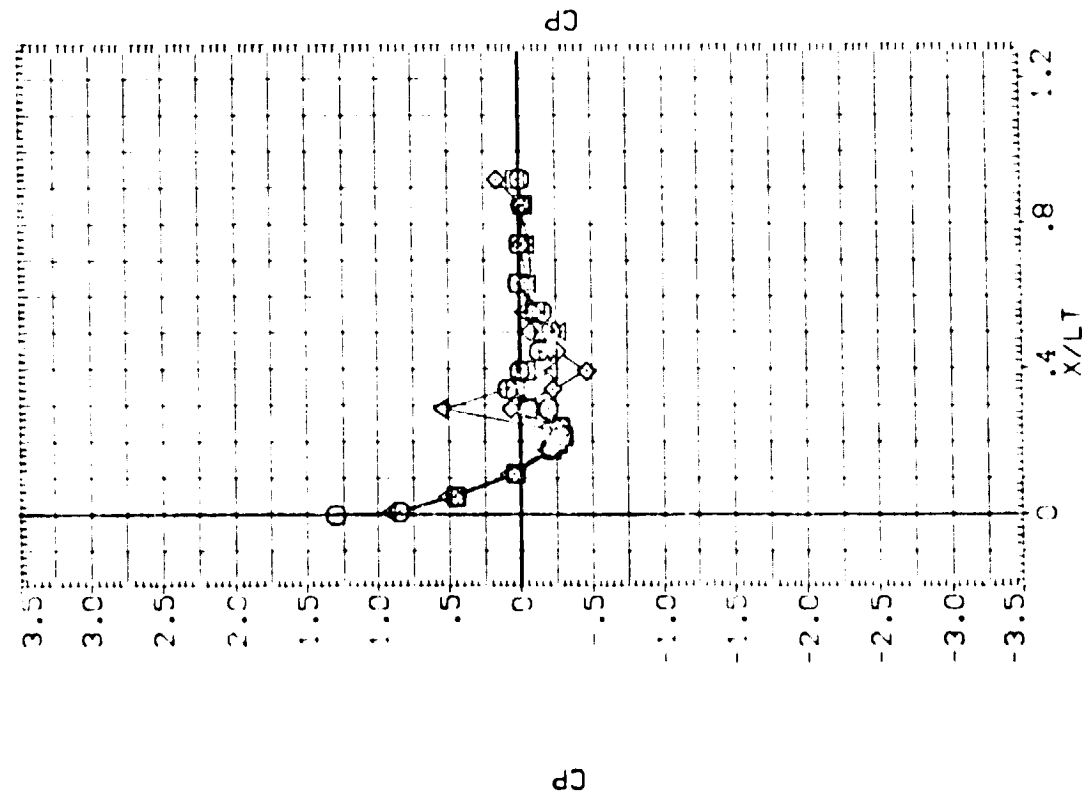
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 (A14 01+112+S12N25+AT1) EXTERNAL TANK (RB1140)

SYMBOL
 ○ 0
 □ 30,000
 ◇ 60,000
 △ 90,000

PHI BETAT ALPHAT
 .000 4.120 -8.430
 30.000 8.270

PARAMETRIC VALUES
 MACH 1.400 ELEV/IN .000
 RUDDER .000 SPOILER .000

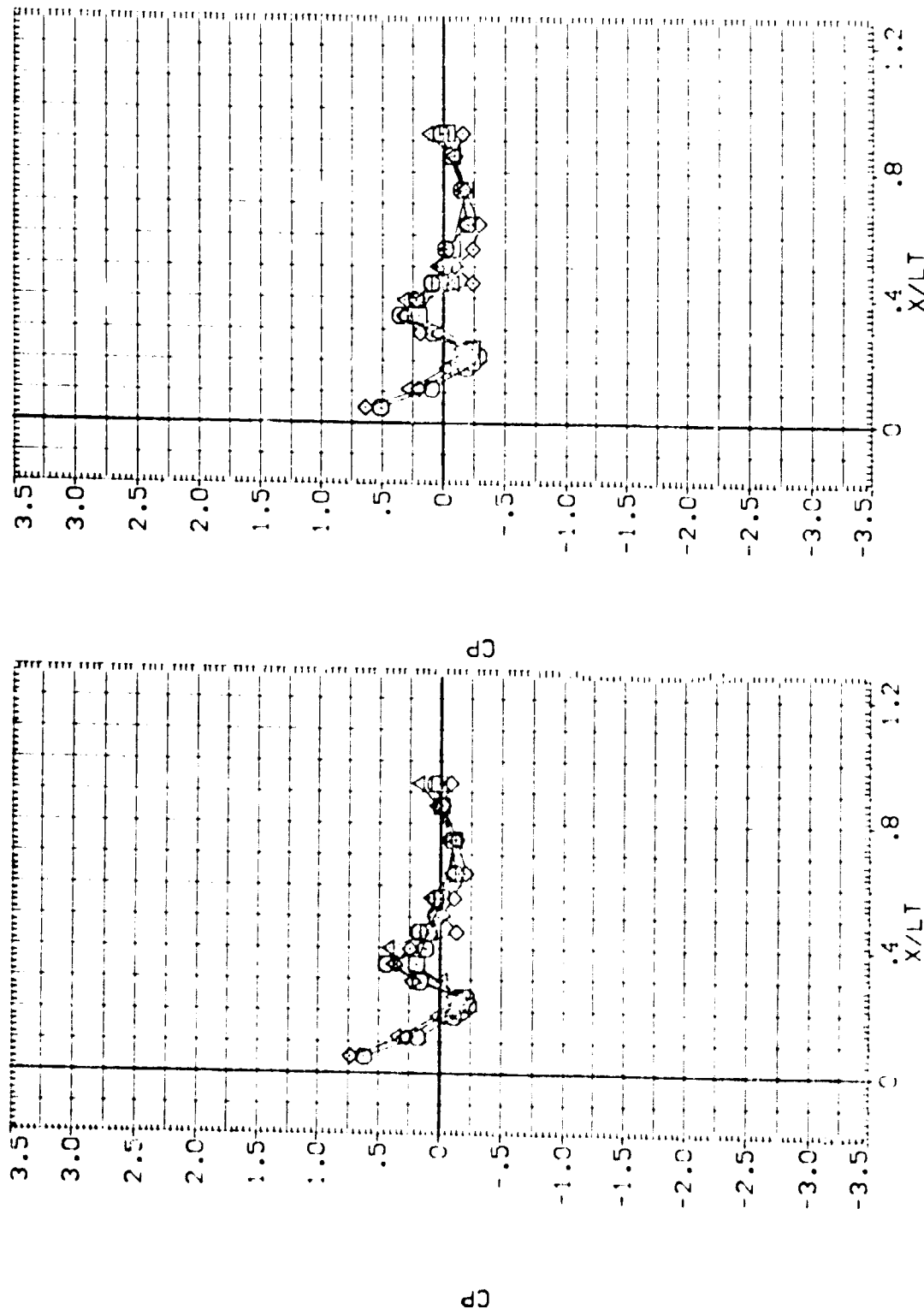


LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES



ARC11-7:6 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
				MACH	ELEVON	
○	120.000	4.120	-8.430	1.400	.000	
◇	135.000	8.270		.000	SPOBRK	.000
△	150.000					
▽	165.000					



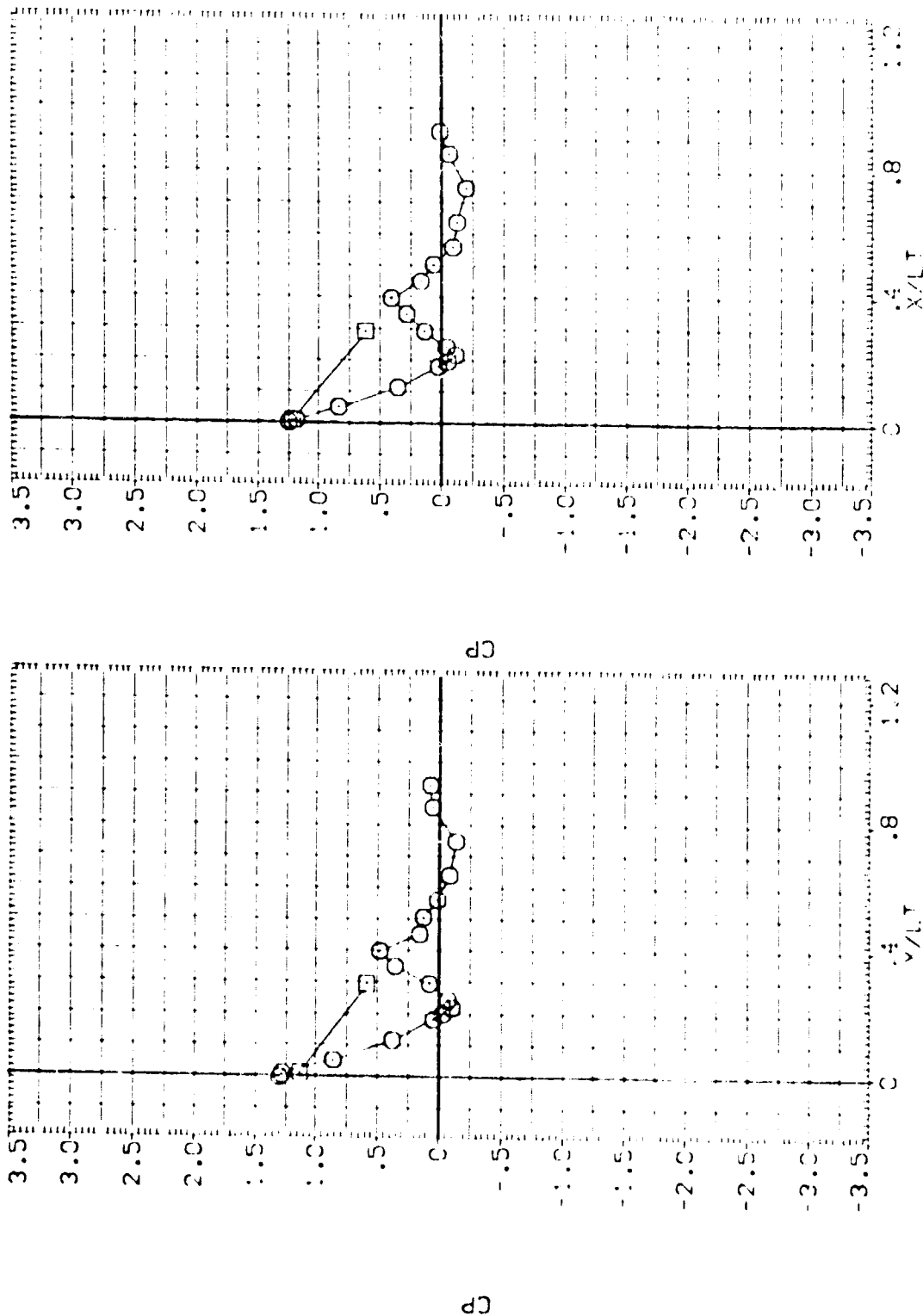
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+12+S12N25+AT11 EXTERNAL TANK (RB1140)

SYMBOL
○
()

PHI BE'AT ALPHAT
180.000 4.120 -8.430
270.000 8.270

PARAMETRIC VALUES
MACH 1.400 ELEV'N .000
RUDDER .000 SP'286K .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+A111 EXTERNAL TANK (RB1T40)

SYMBOL

○ □ ◇ △

PHI .000
30.000
60.000
90.000

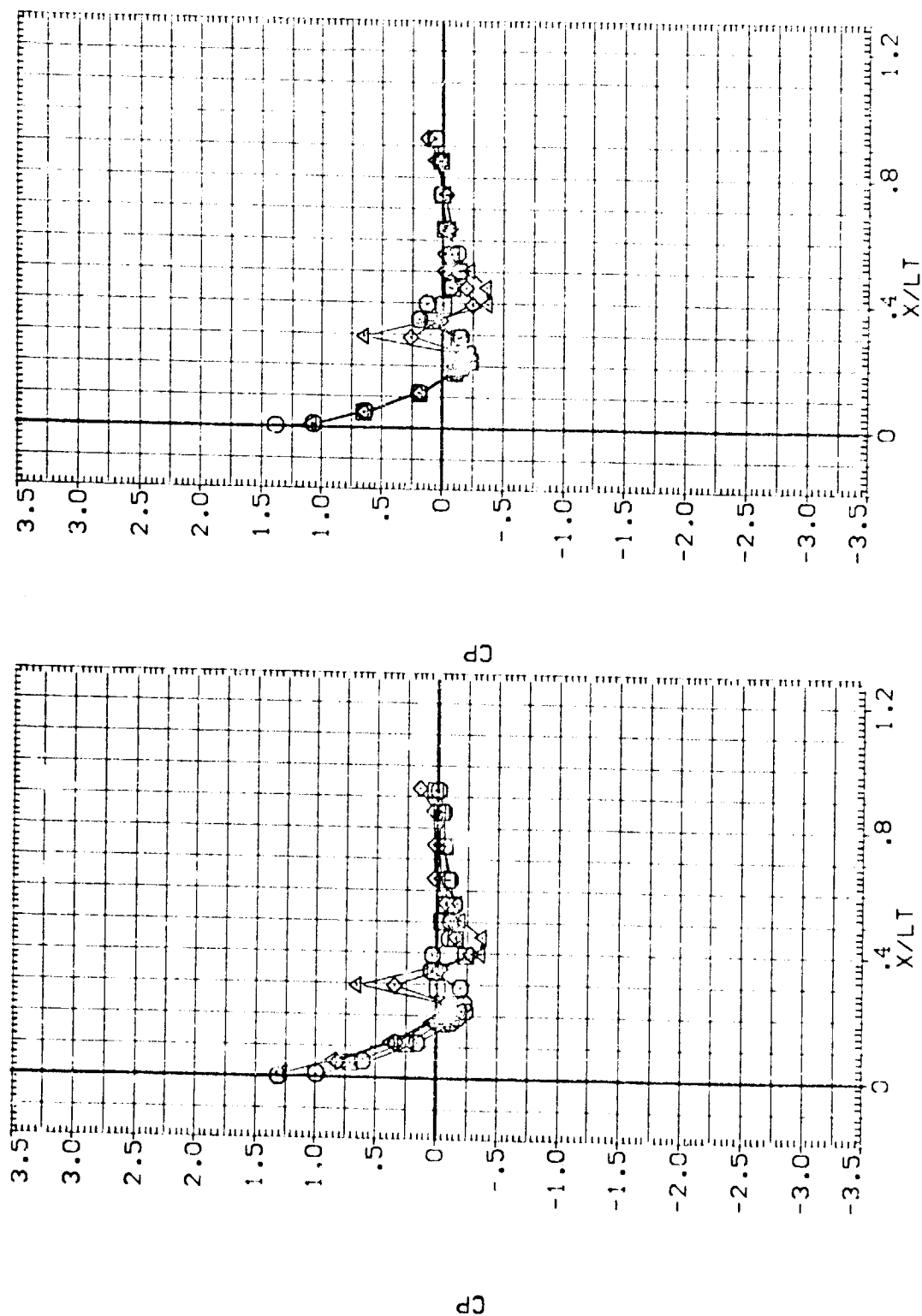
BETAT -8.230
-0.010

ALPHAT -5.560

PARAMETRIC VALUES

1.400 ELEVON .000
.000 SPD3RK .000

MACH
RUDDER



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

SYMBOL

○ □ ◇

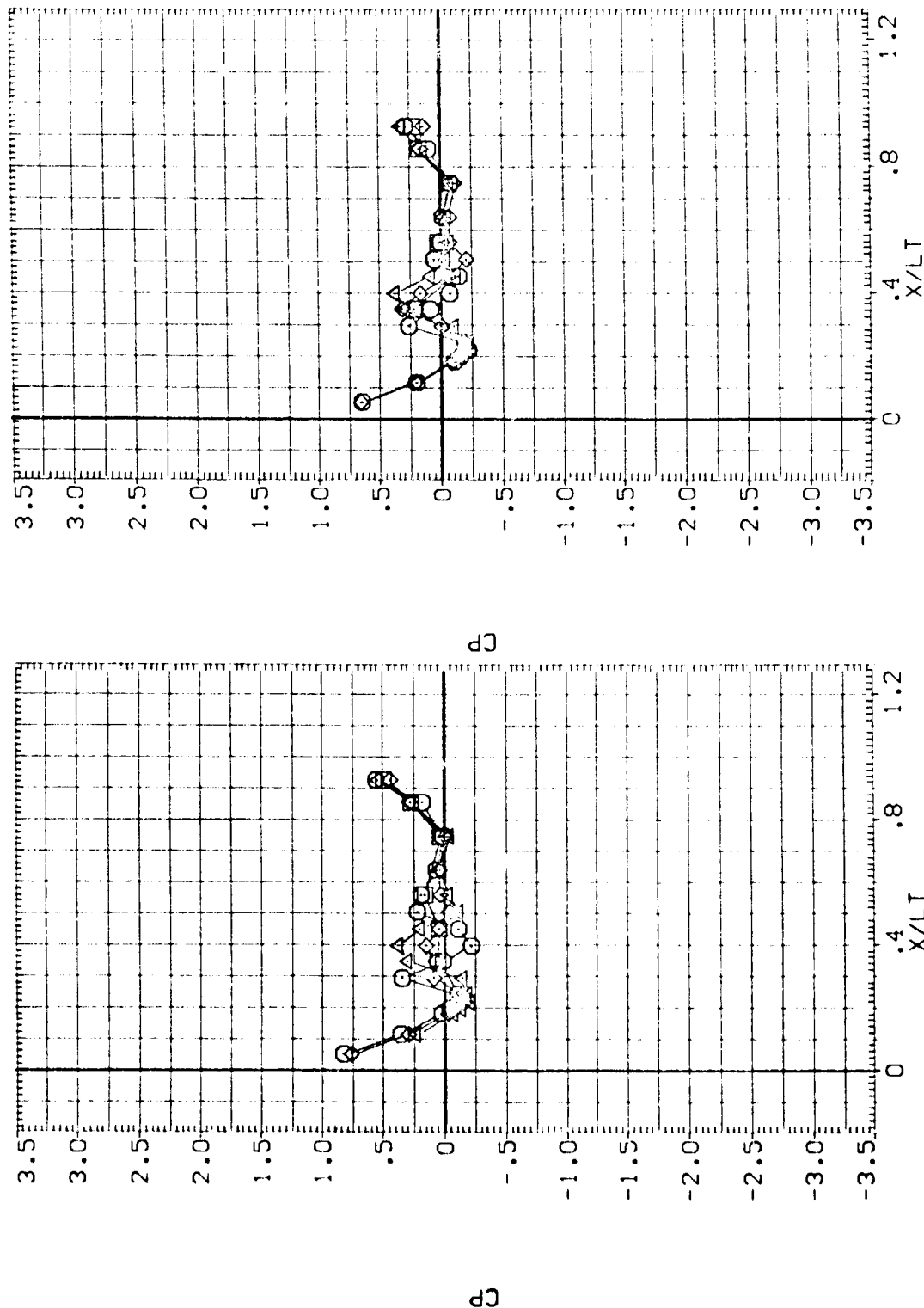
PHI 120.000
135.000
150.000
165.000

BETAT -8.230
- .010

ALPHAT -.560

PARAMETRIC VALUES

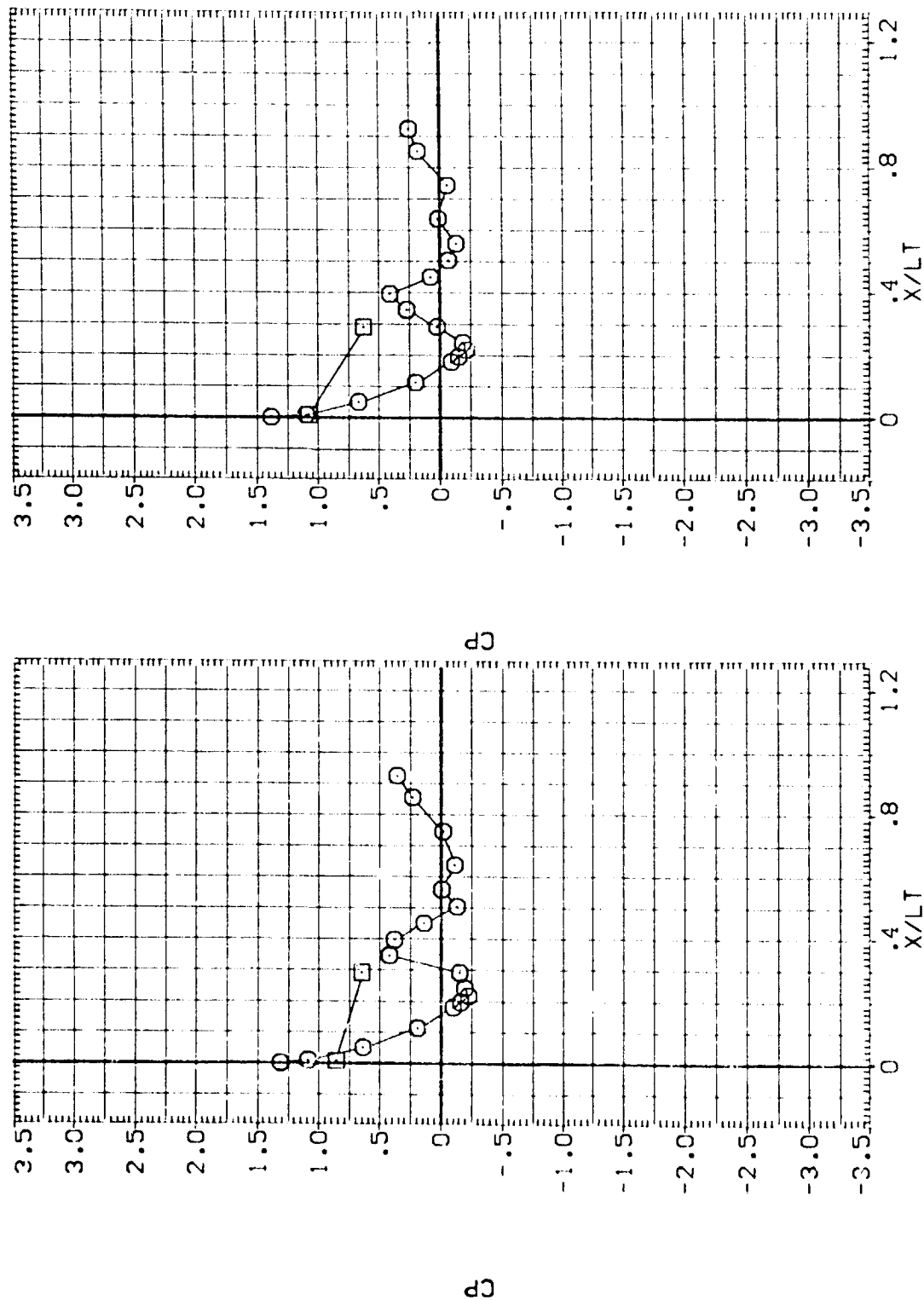
MACH 1.400
RUDDER .000
ELEVON .000
SPDRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1140)

SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
○	180.000	-8.230	-.560	MACH	1.400	ELEVON .000
□	270.000	-.010		RUDDER	.000	SPDRPK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

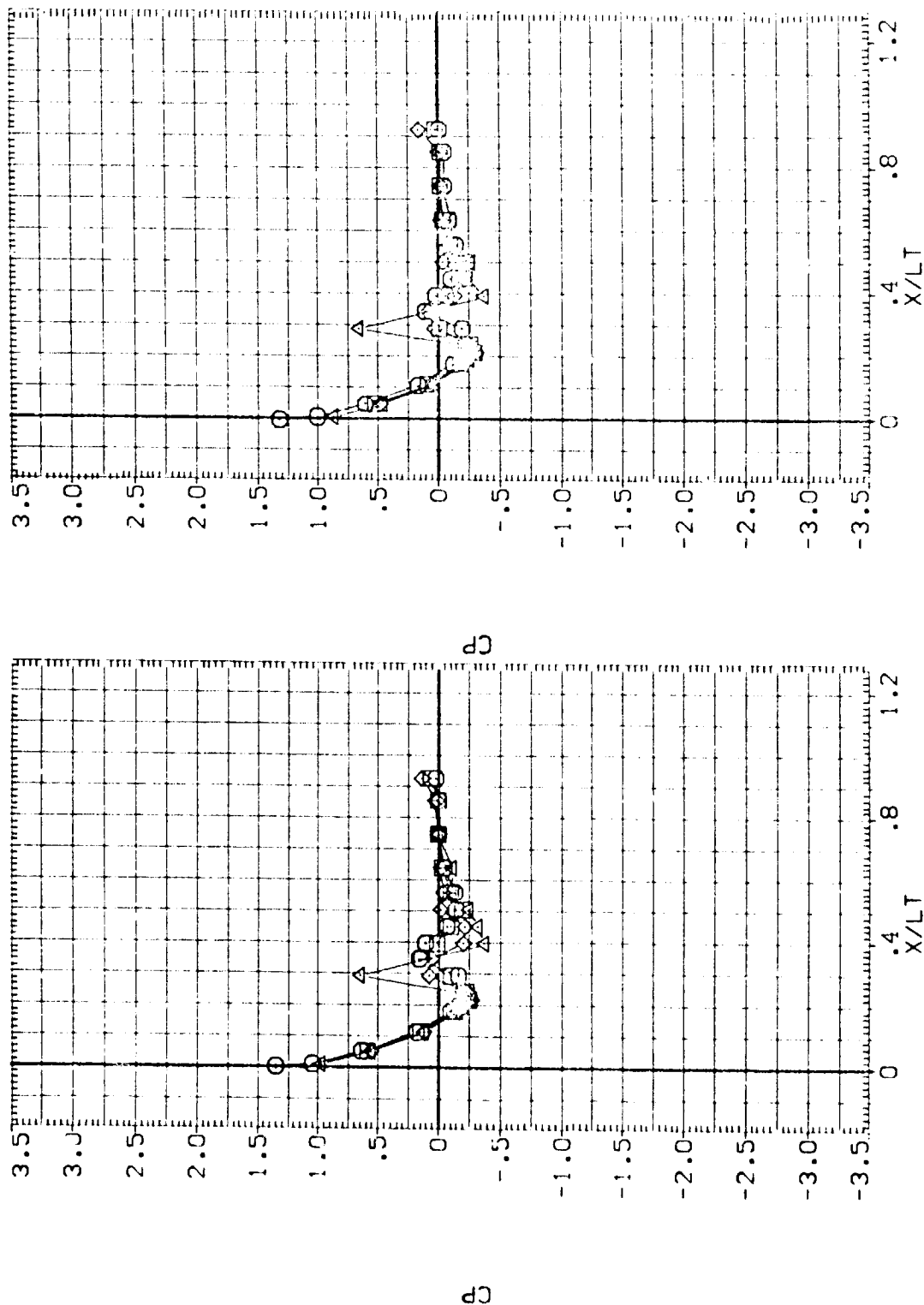
SYMBOL

PHI .000
30.000
60.000
90.000

BETAT 4.110
8.210

ALPHAT -5.50

PARAMETRIC VALUES
MACH 1.400
ELEVON .000
RUDDER .000
SPDBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

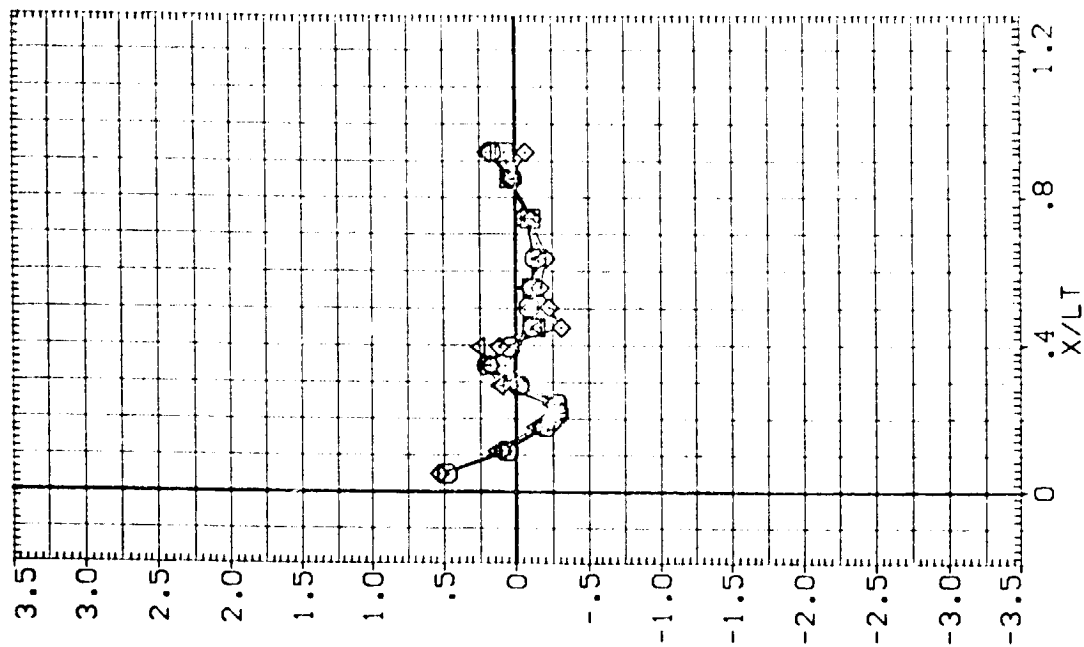
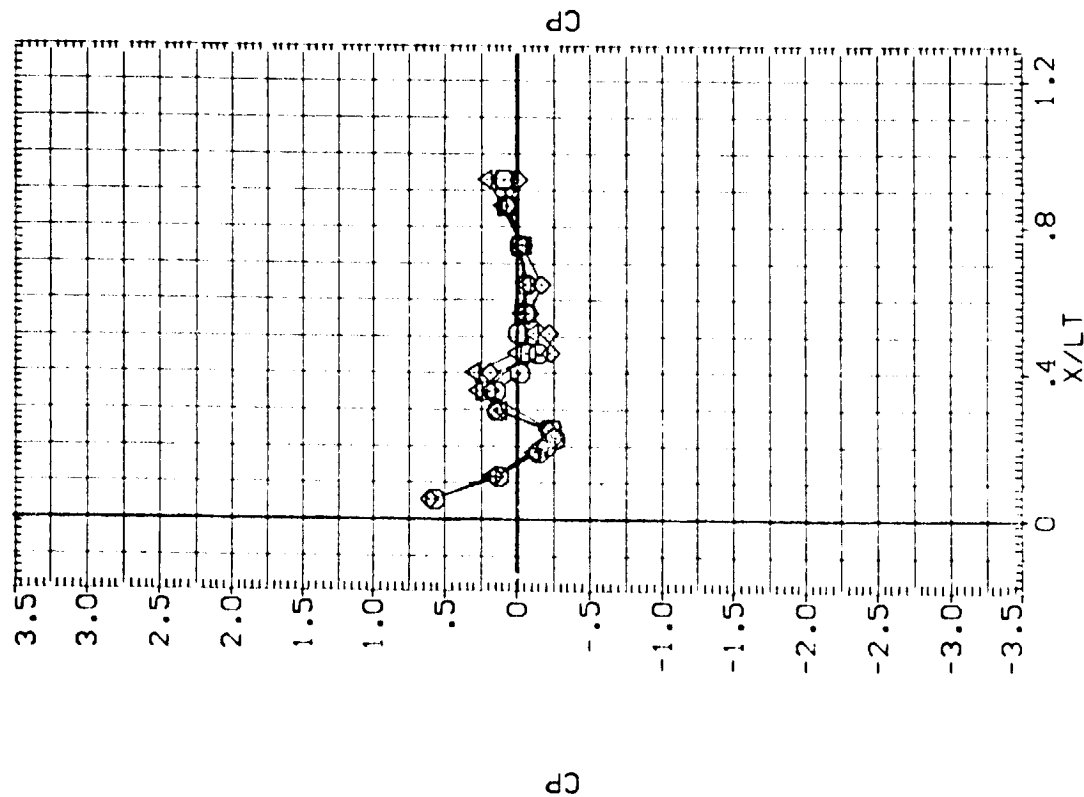
SYMBOL
 O
 □
 ◇
 △

PHI
 120.000
 135.000
 150.000
 165.000

BETAT
 4.110
 8.210

ALPHAT
 -.550

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

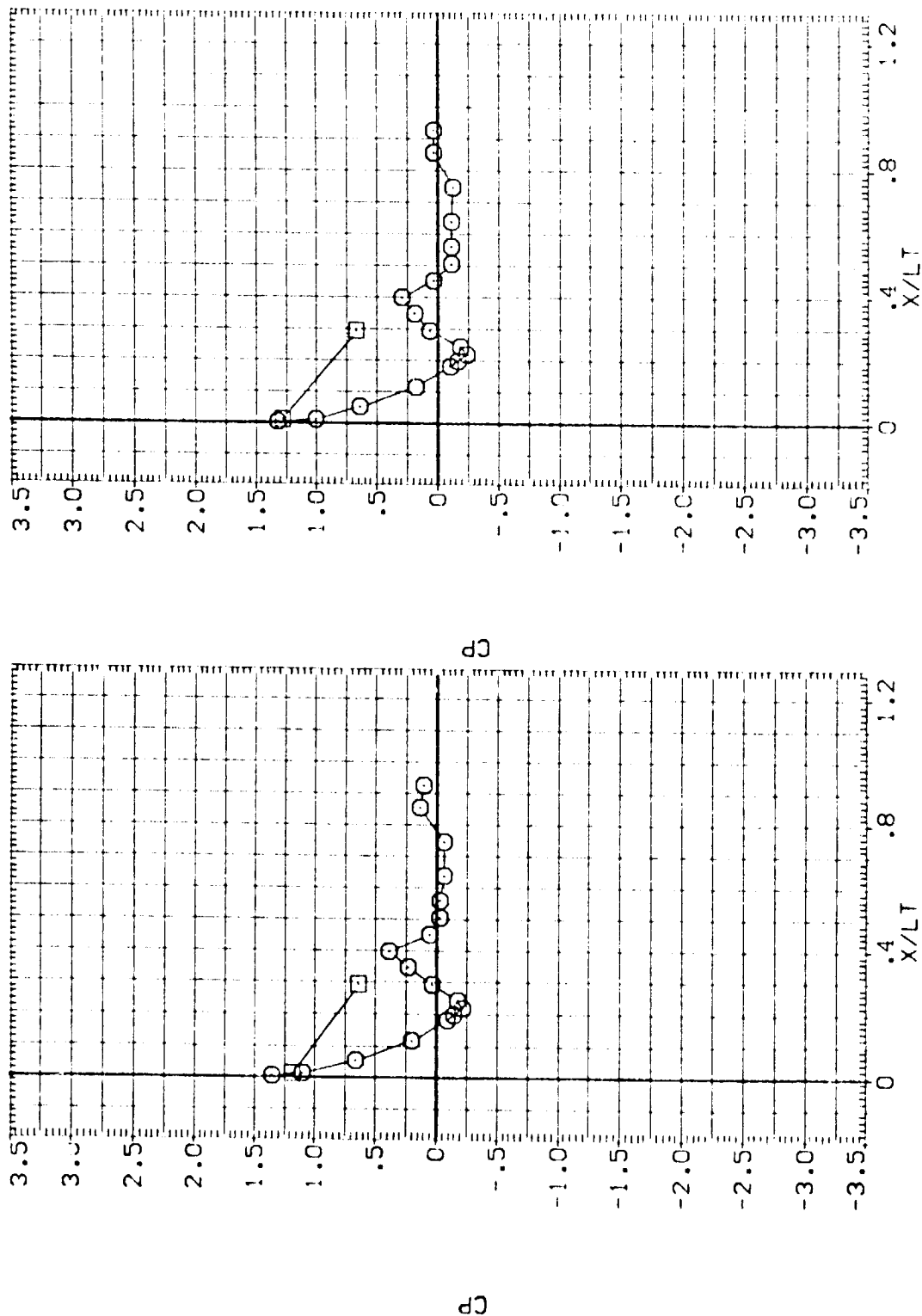
SYMBOL
O []

PHI 180.000
270.000

BETAT 4.110
8.210

ALPHAT -550

PARAMETRIC VALUES
MACH 1.400
RUDDER .000
ELEVON .000
SPDRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

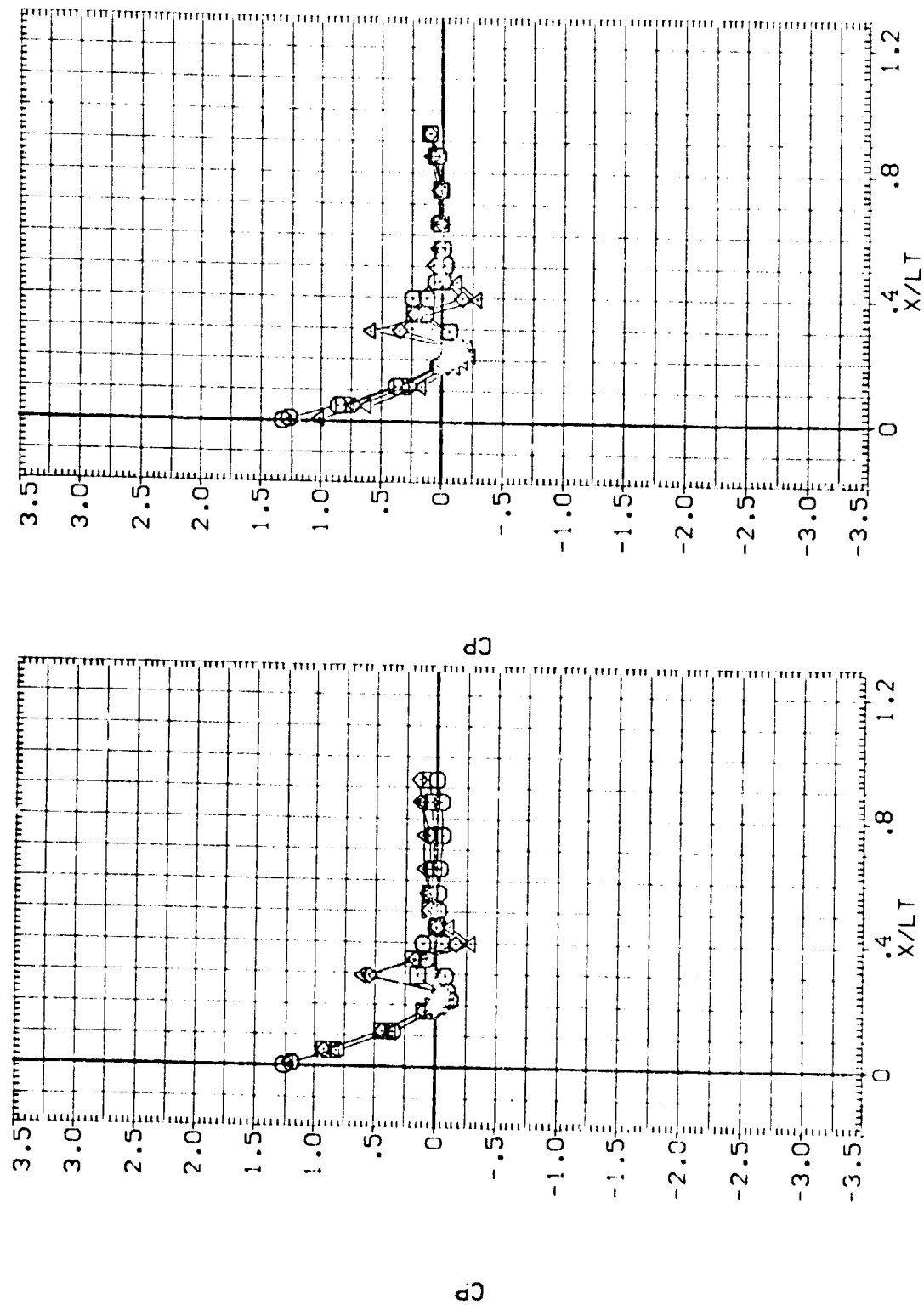
SYN60L
 O □ ◇ △

PHI .000
 30.000
 60.000
 90.000

BETAT -8.220
 .000

ALPHAT 8.120

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOBRK .000



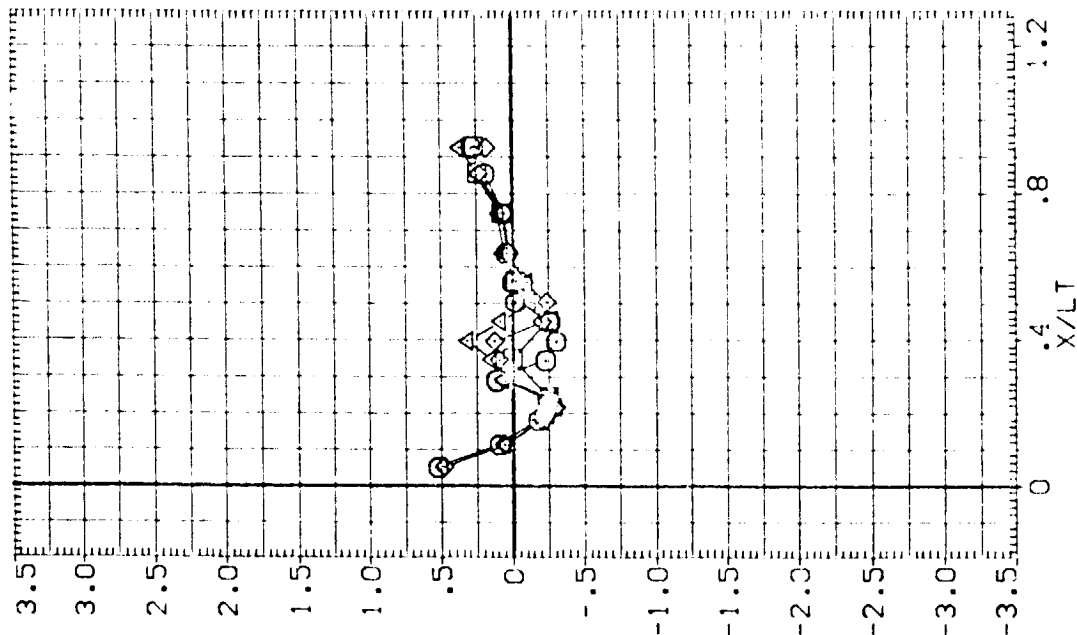
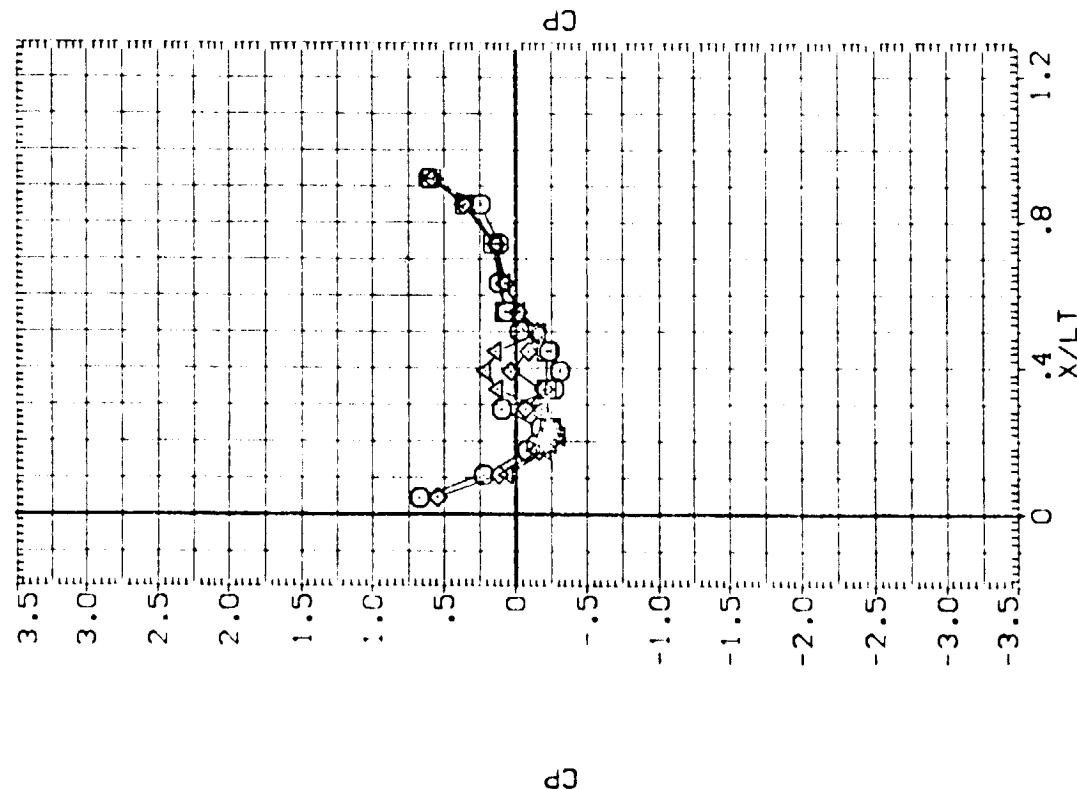
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

SYMBOL
 O
 □
 △

PHI BETAT ALPHAT
 120.000 -8.22C 8.120
 135.000 .000
 150.000
 165.000

PARAMETRIC VALUES
 MACH 1.400 ELEVON .000
 RUDDER .000 SPDBRY .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

SYMBOL

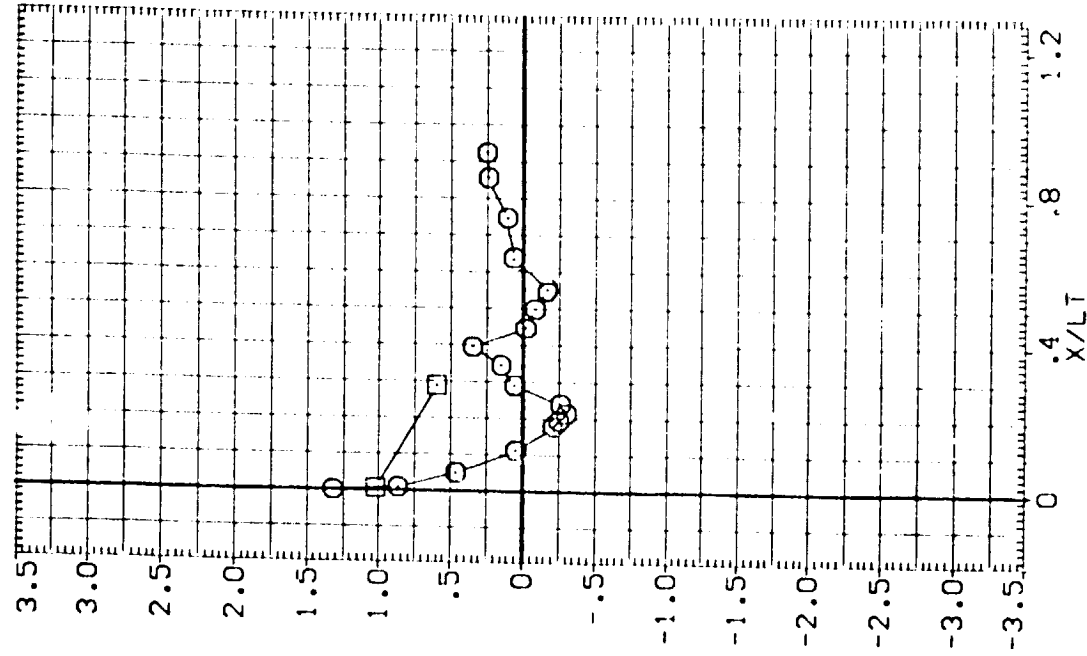
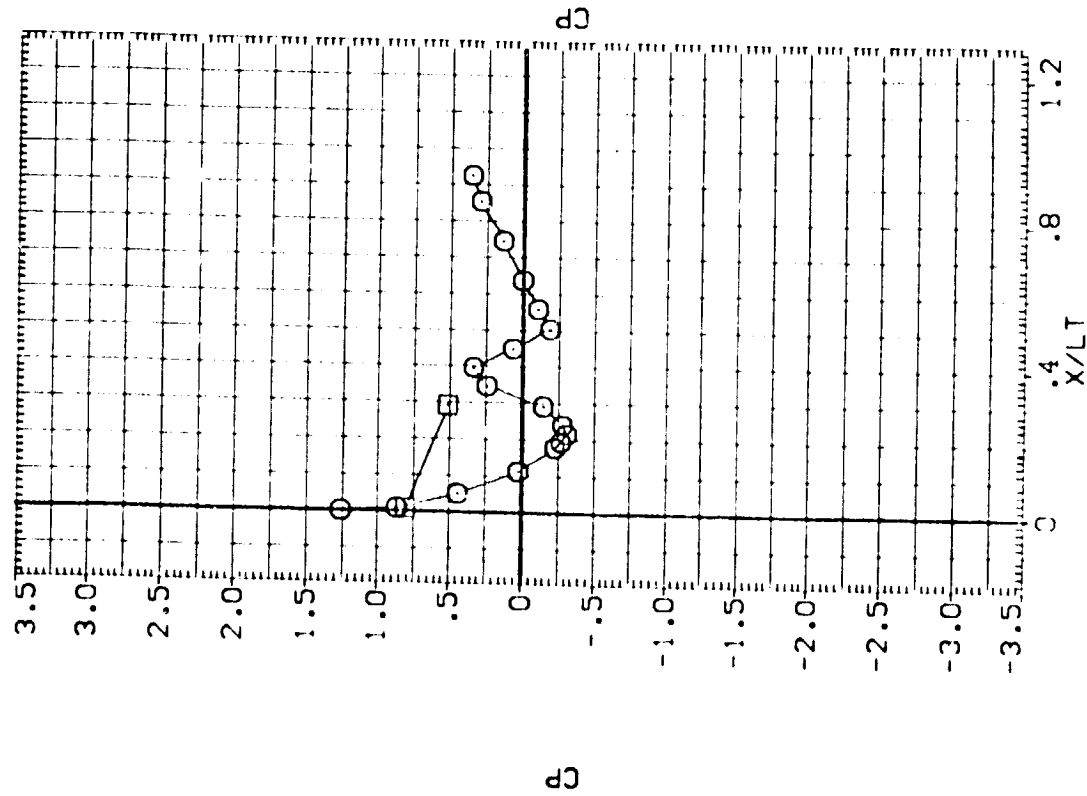
PHI 180.000
270.000

BETA -8.220
.000

ALPHAT 9.120

MACH 1.400
RUDDER .000

PARAMETRIC VALUES
ELEVON 1.400
SPDRBK .000



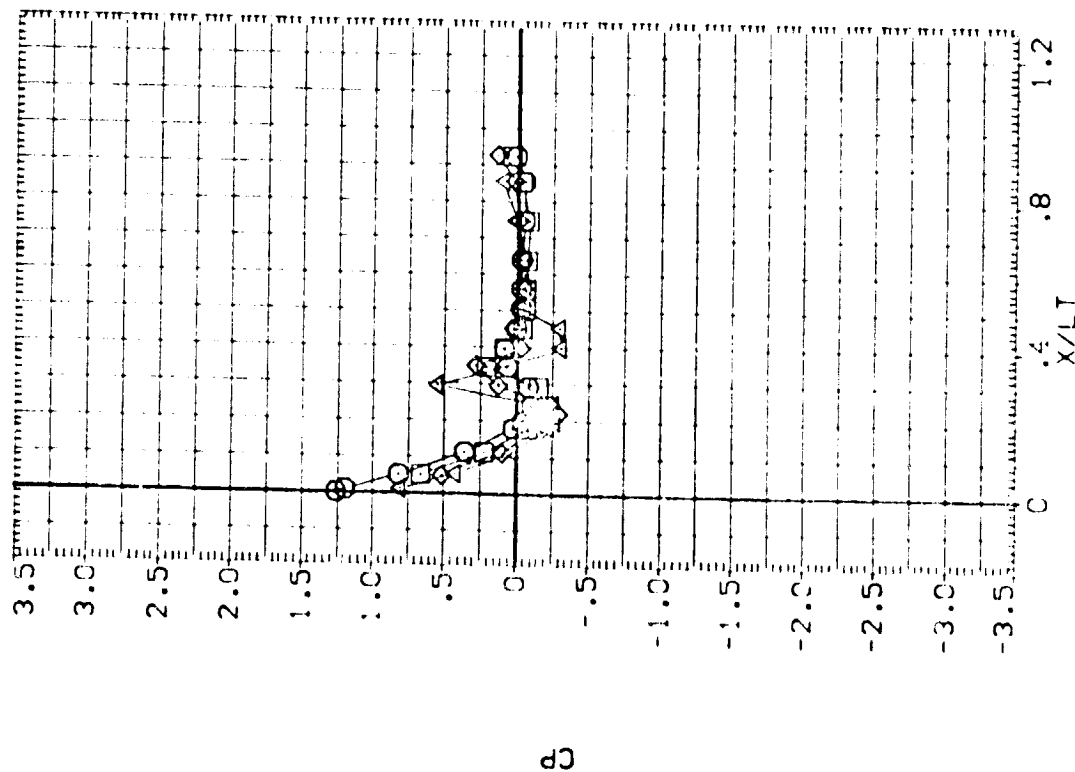
LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 EXTERNAL TANK (RB1140)

SYMBOL
 ○
 ◇
 △

PHI
 .000
 30.000
 60.000
 90.000

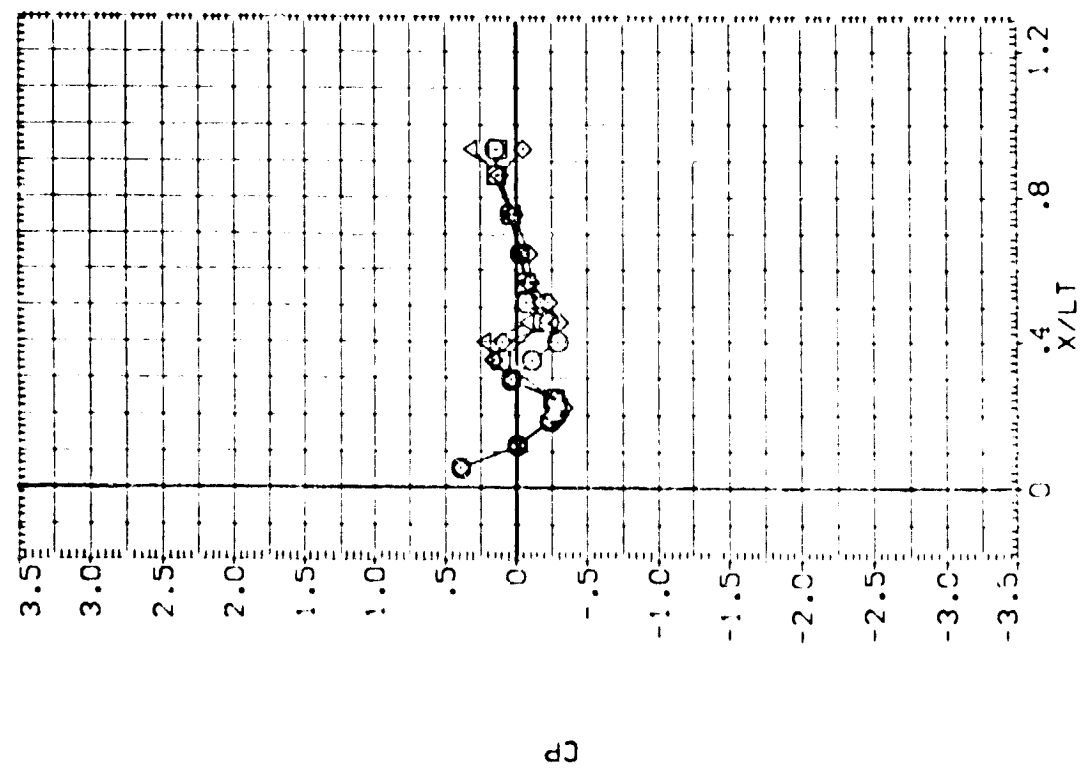
PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 EXTERNAL TANK (RB1T40)

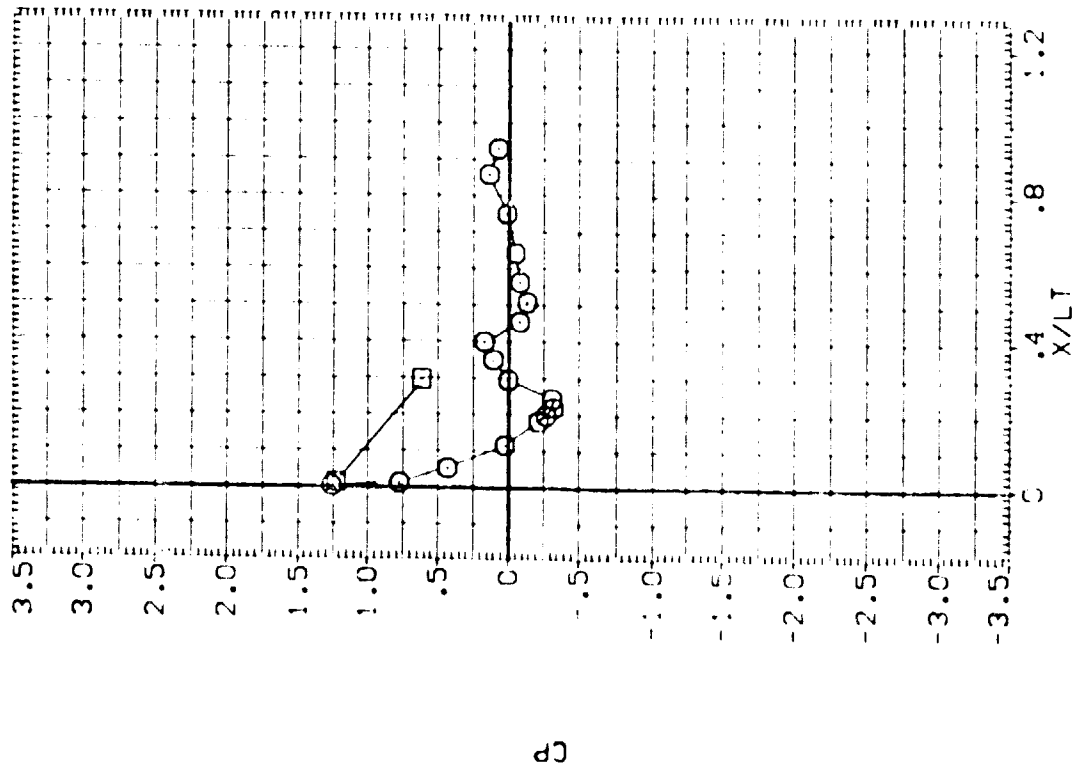
SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES
○	120.000	8.300	8.150	MACH
◇	135.000			RUDER
△	150.000			1.400
	165.000			ELEVON
				.000
				SPOBRK
				.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC:-716 1A14 01+T12+S12A25+AT11 EXTERNAL TANK (RB1T40)

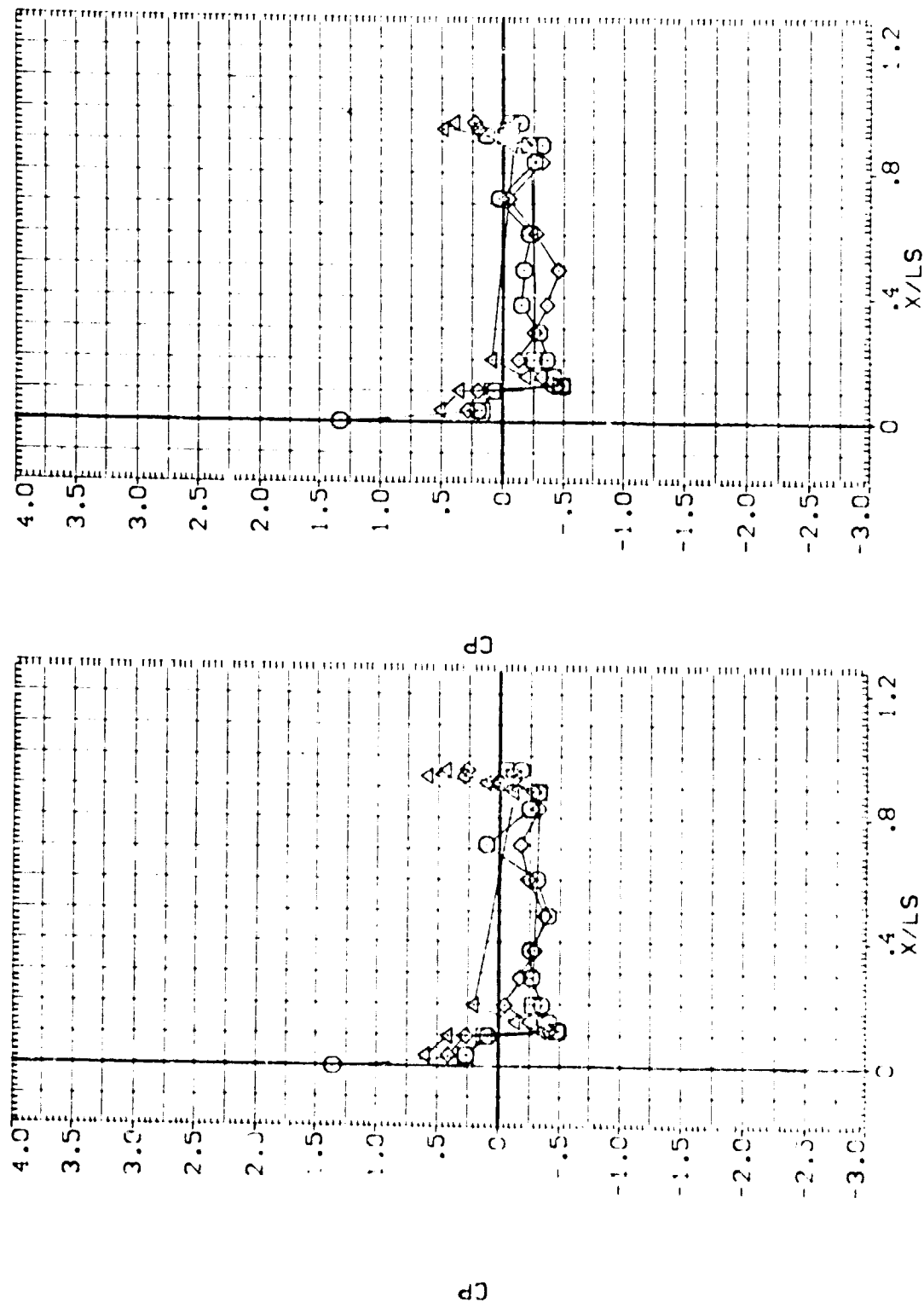
SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
○	180.000	8.300	8.150	MACH	ELEVON	.000
□	270.000			RUDDER	SPDBRK	.000



LONGITUDINAL DISTRIBUTION OF EXTERNAL TANK PRESSURES

ARC11-716 1A14 01+12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL	PHI	BETAG	ALPHA0	PARAMETRIC VALUES		
				MACH	ELEVON	
○	.000	-7.960	-8.240	.000	.000	
◇	45.000	-3.980		.000	SP38PK	
△	90.000					
▽	135.000					



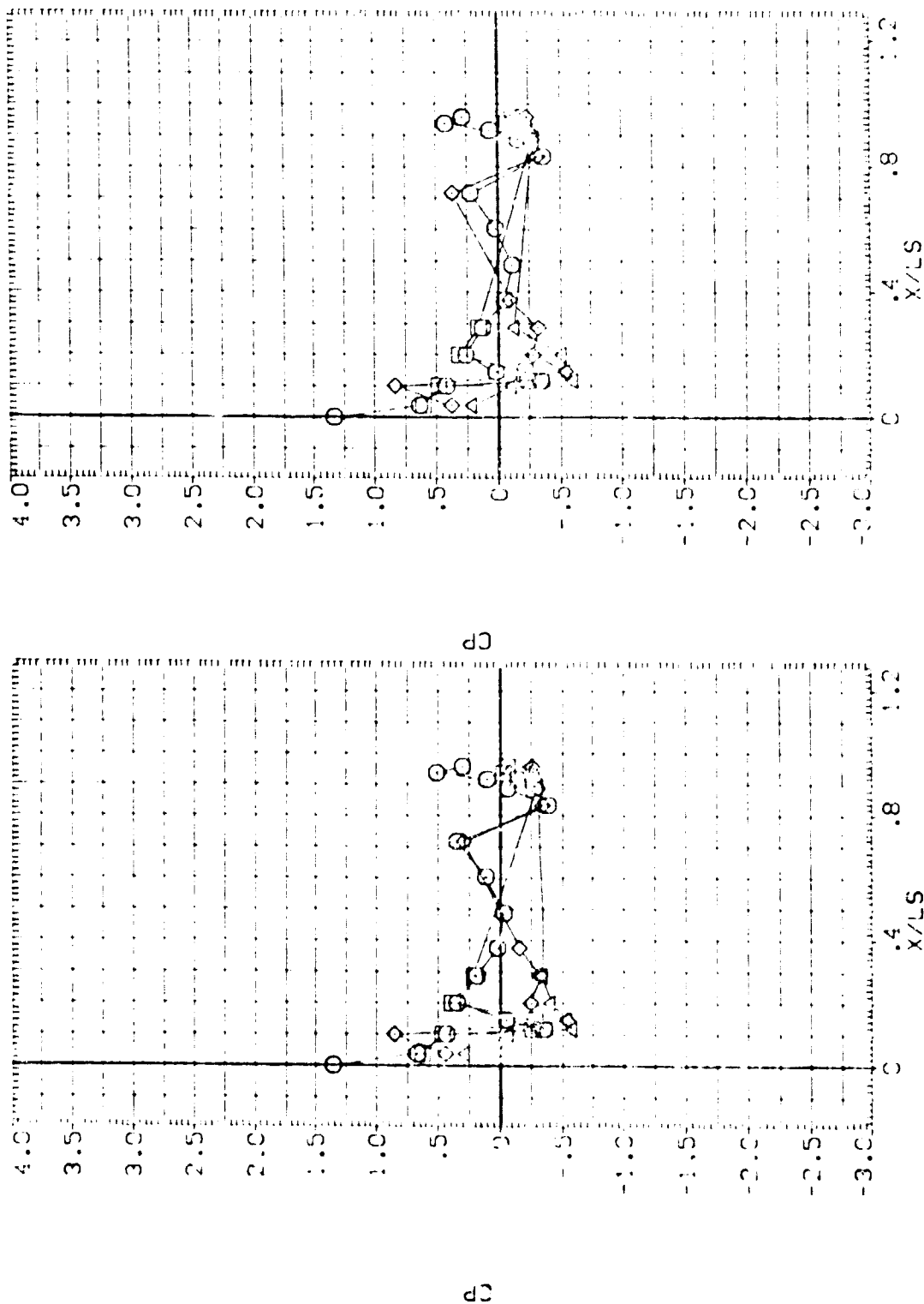
LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+12+S12N25+AT10 SRM BOOSTER (R31S33)

SYMBOL

PHI BETA0 ALPHA0
180.000 -7.960 -8.240
225.000 -3.980
270.000
315.000

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOON .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+A110 SRM BOOSTER (RB1S33)

SYMBOL

○ □ ◇ △

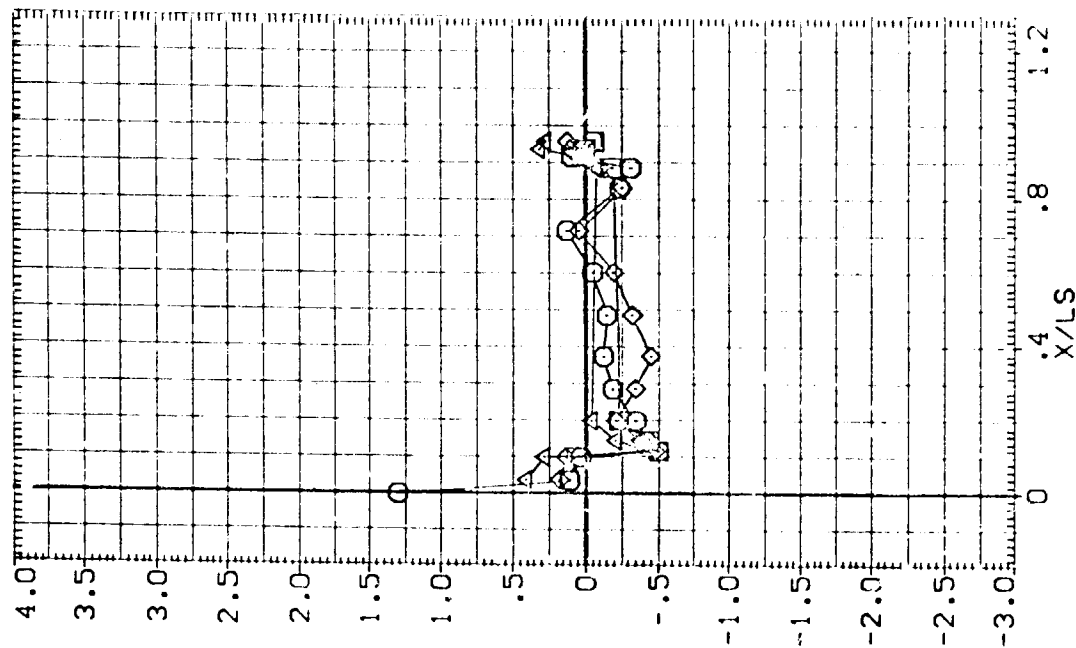
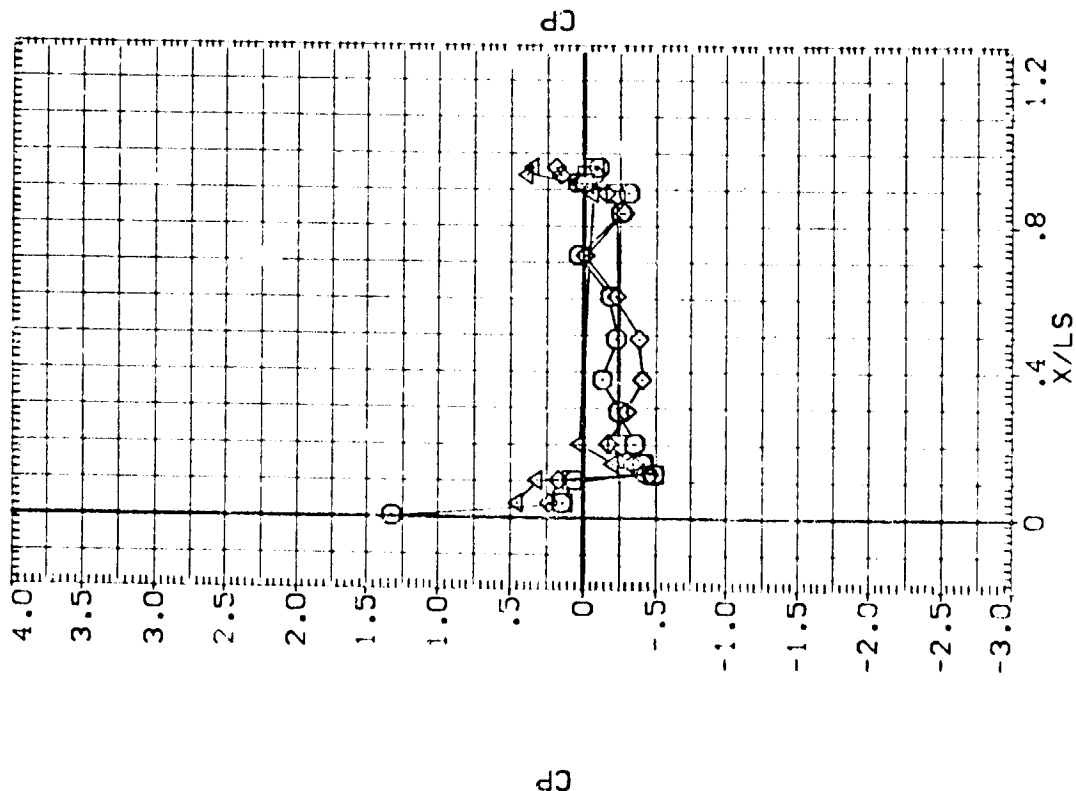
PHI .000
45.000
30.000
135.000

BETA0 -1.950
.010

ALPHA0 -6.250

MACH .000
RUDDER .000

PARA ETRIC VALUES
1.250 ELEVON
.000 SPOBRK



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

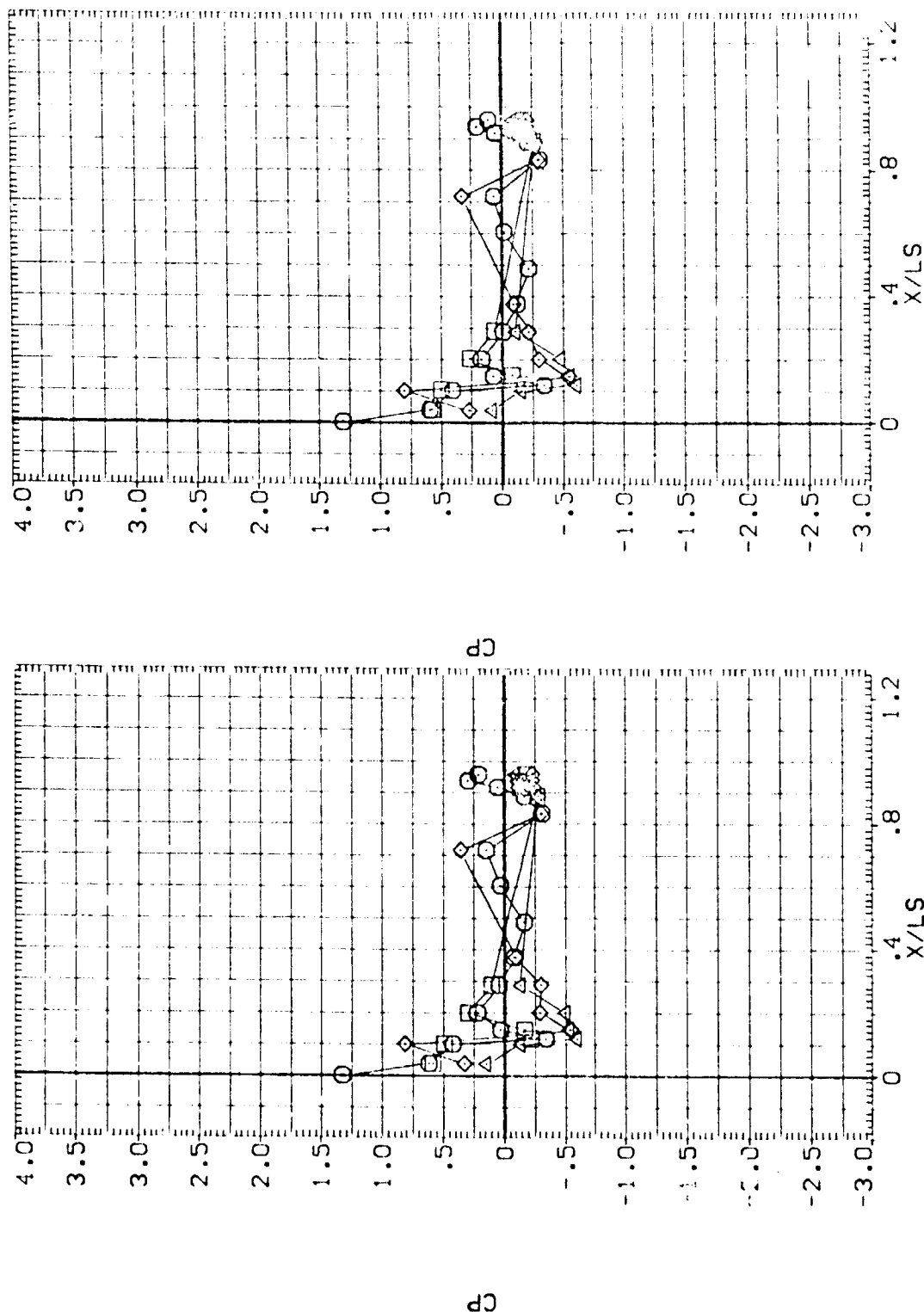
ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL

180.000
225.000
270.000
315.000

BETA0 -1.990
ALPHA0 -8.250
0.010

MACH
RUDDER
PARAMETRIC VALUES
1.250
ELEVON
SP/BRK
.000
.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL

○ □ ◇ △

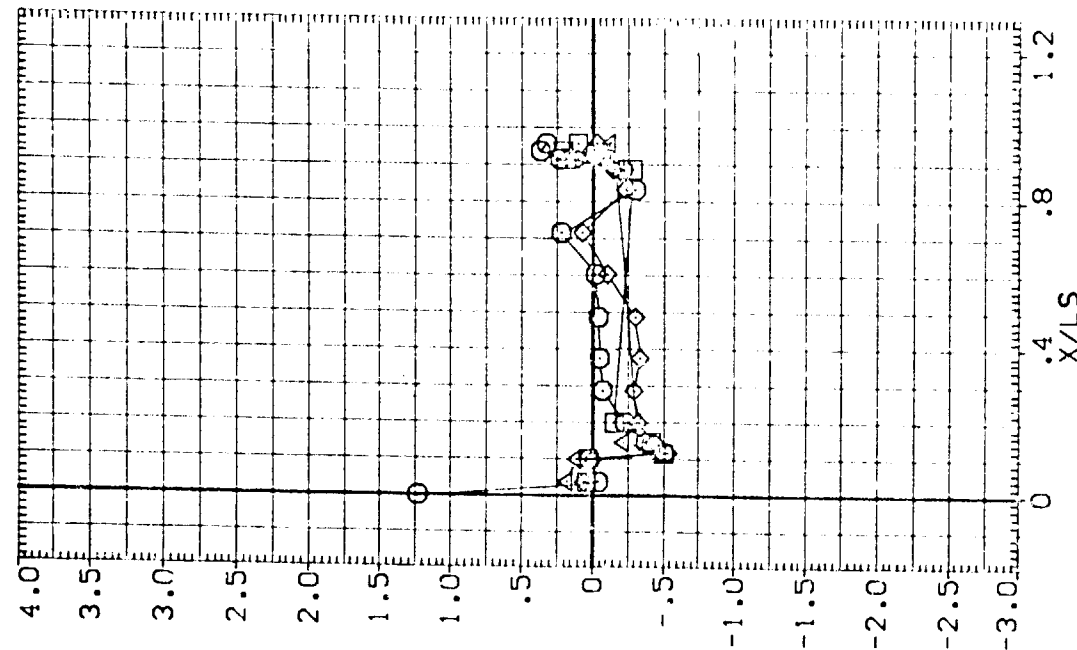
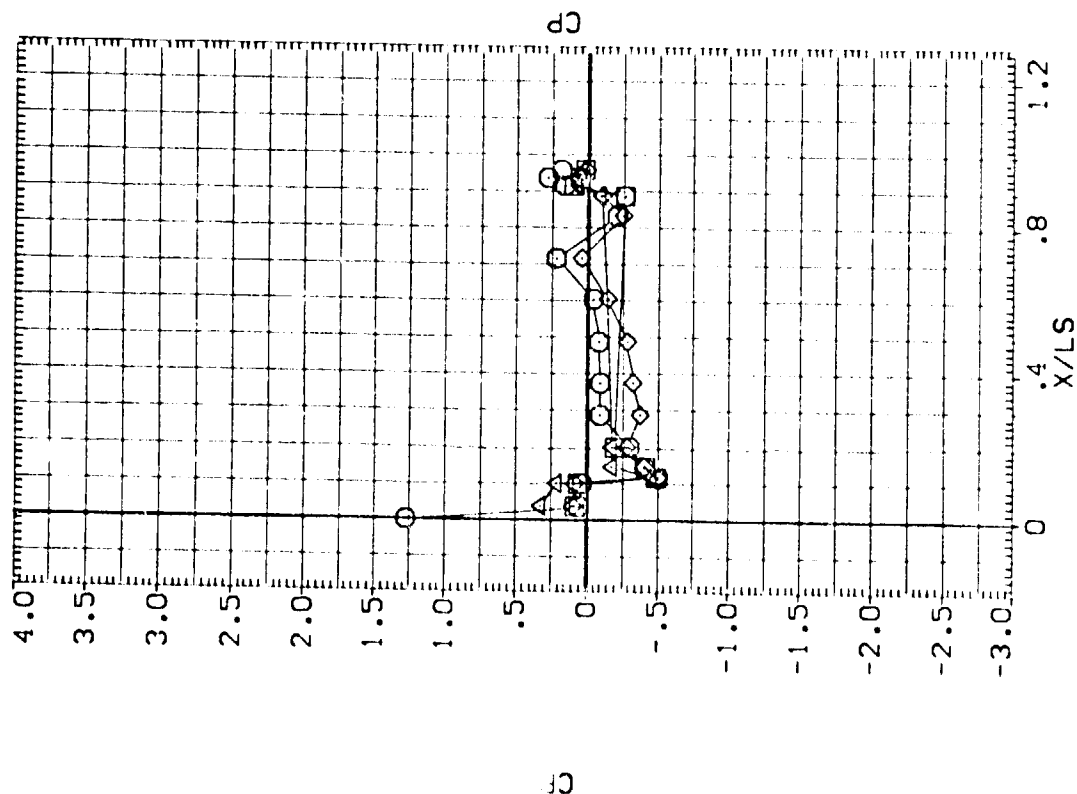
PHI .000
45.000
29.000
135.000

BETA0 4.040
8.100

ALPHA0 -8.230

MACH 1.250
RUDDER .000

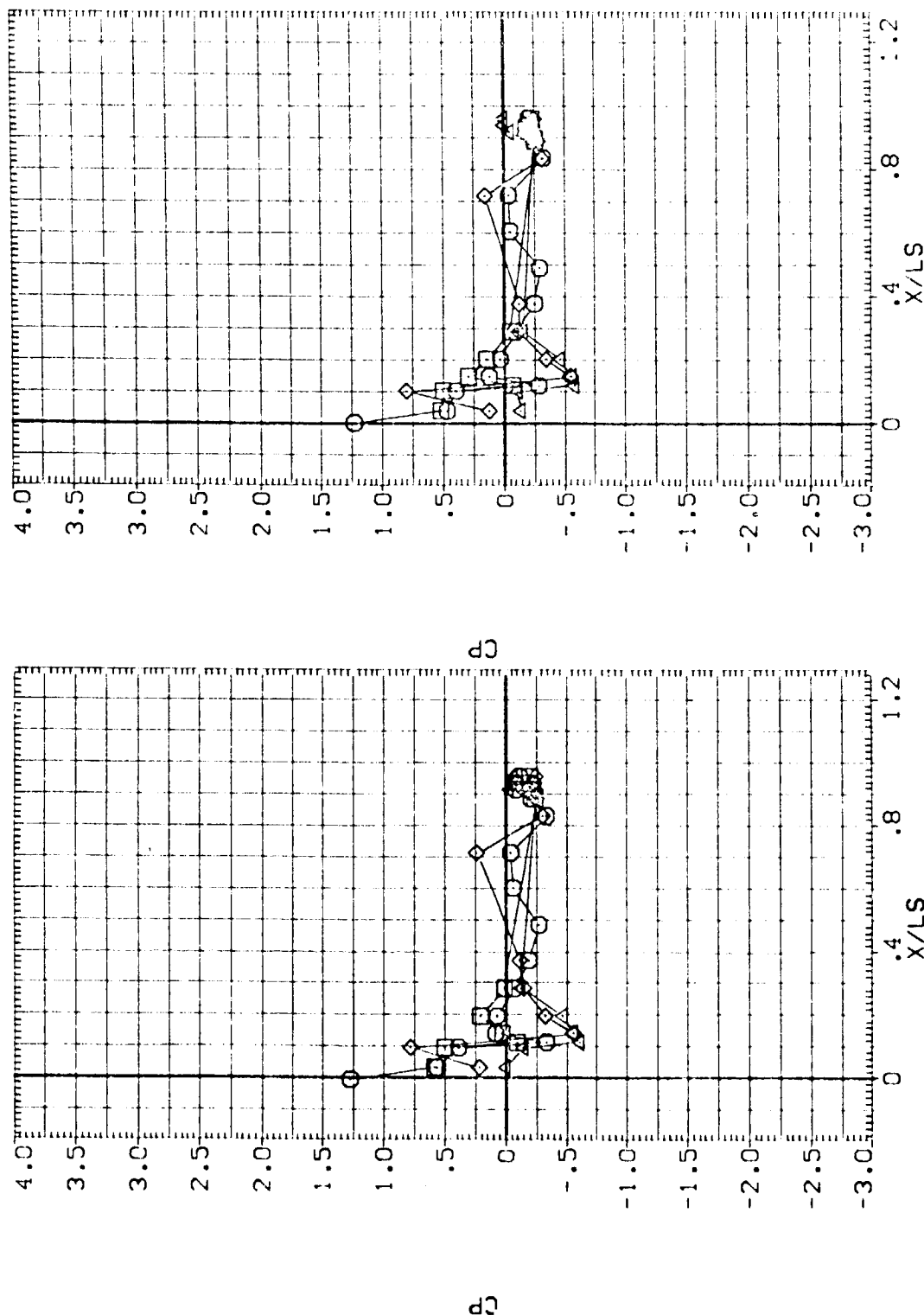
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES
○	180.000	4.040	-8.230	MACH 1.250 ELEVON .000
□	275.000	8.100		RUDDER .000 SPOBRK .000
◇	270.000			
△	315.000			



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

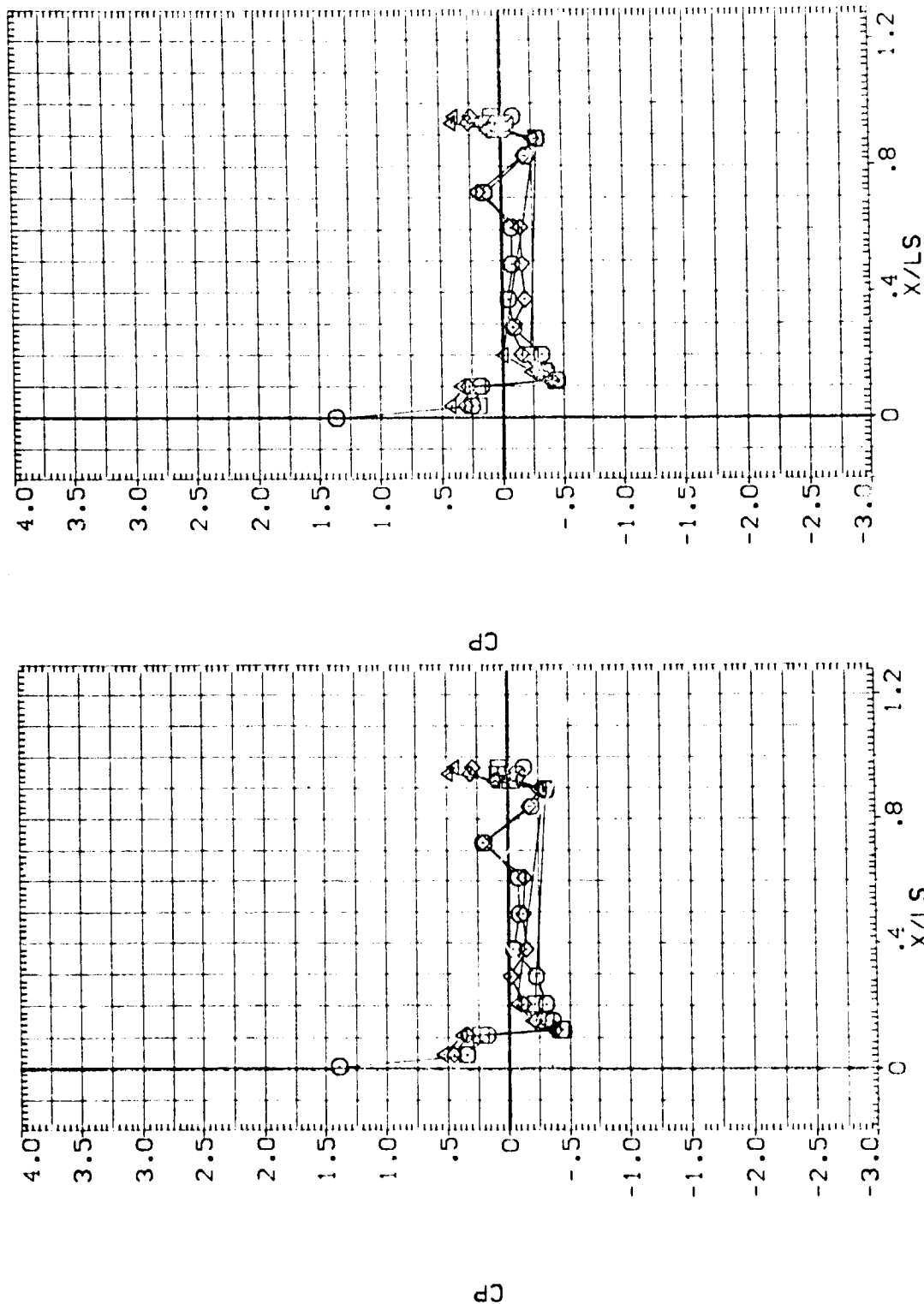
SYMBOL
 ○ □ ◇ △

PHI .000
 45.000
 90.000
 135.000

BETA0
 -7.990
 -3.950

ALPHA0
 -4.230

PARAMETRIC VALUES
 MACH 1.750
 RUDDER .000
 ELEVON .000
 SPDRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+112+512N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL

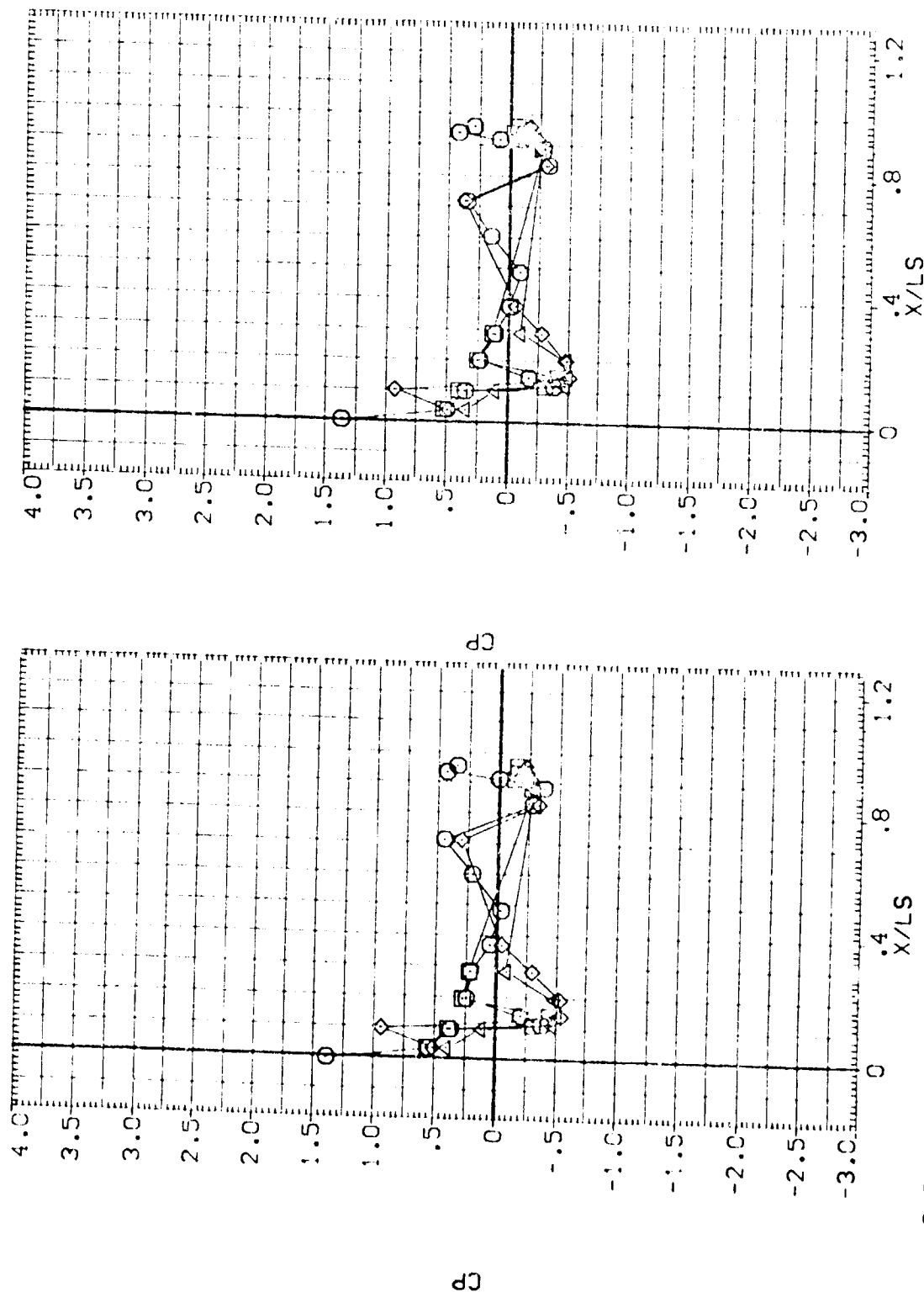
PHI 180.000
225.000
270.000
315.000

BETA0 -7.990
-3.950

ALPHA0 -4.230

MACH 1.250
RUDDER .000

PARAMETRIC VALUES
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL
 ○
 □
 ◇
 △

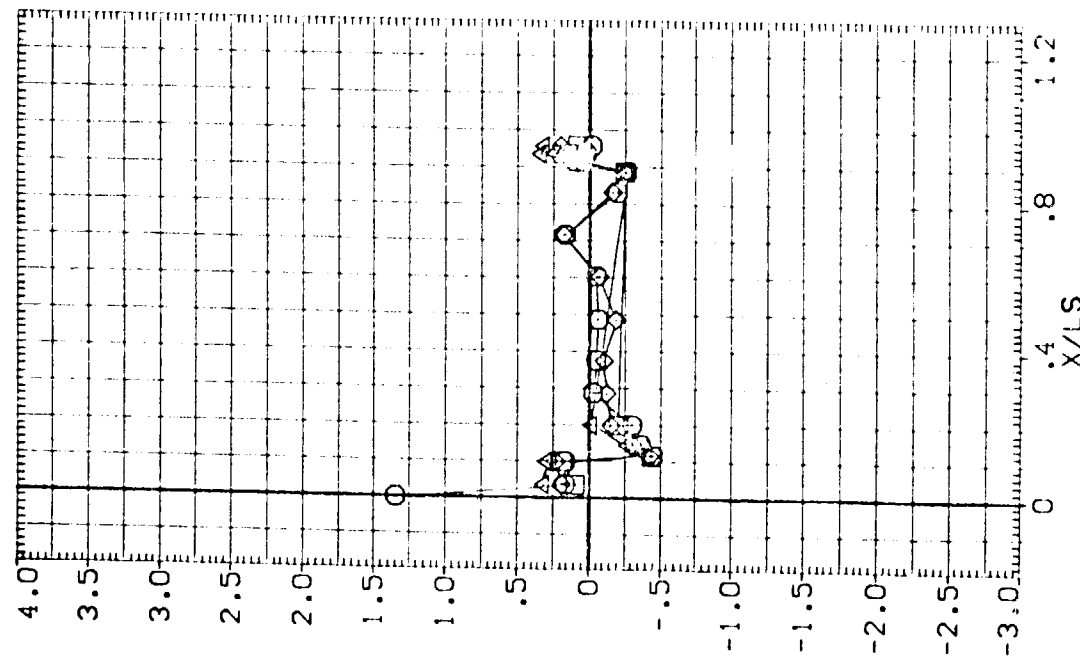
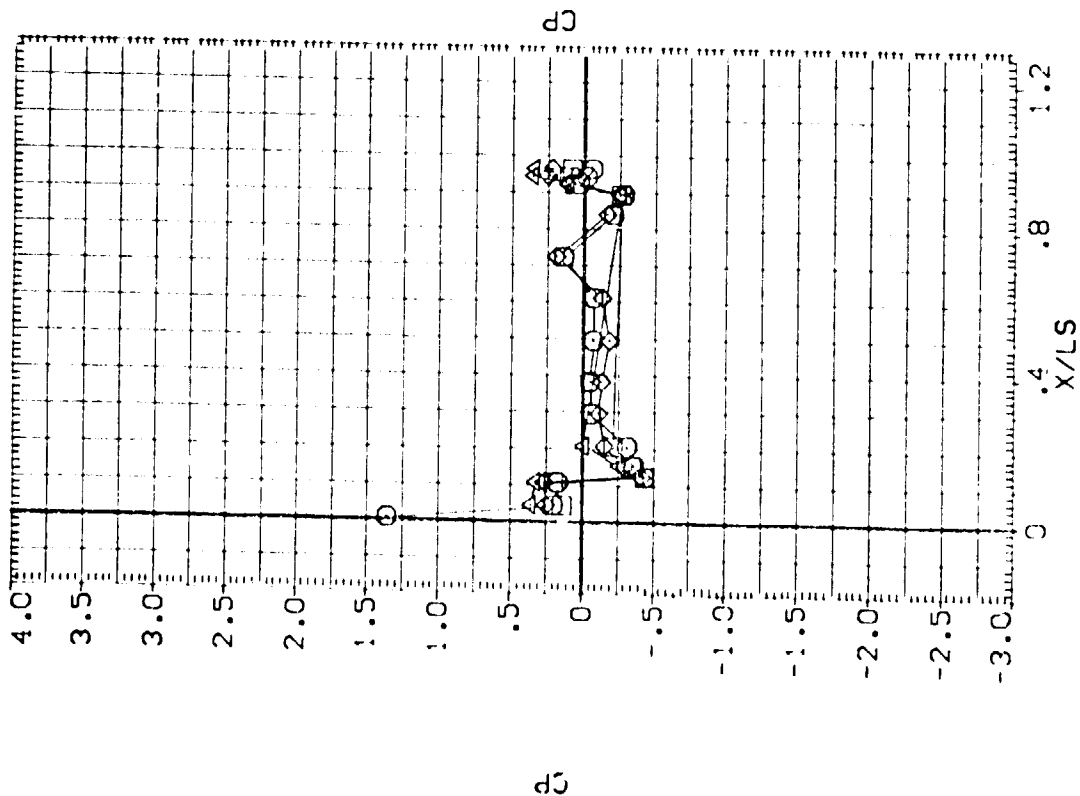
PHI .000
 45.000
 90.000
 135.000

BETAG -2.020
 -0.010

ALPHA0 -4.150

MACH .000
 RUDDER .000
 ELEVON 1.250
 SPOBRK .000

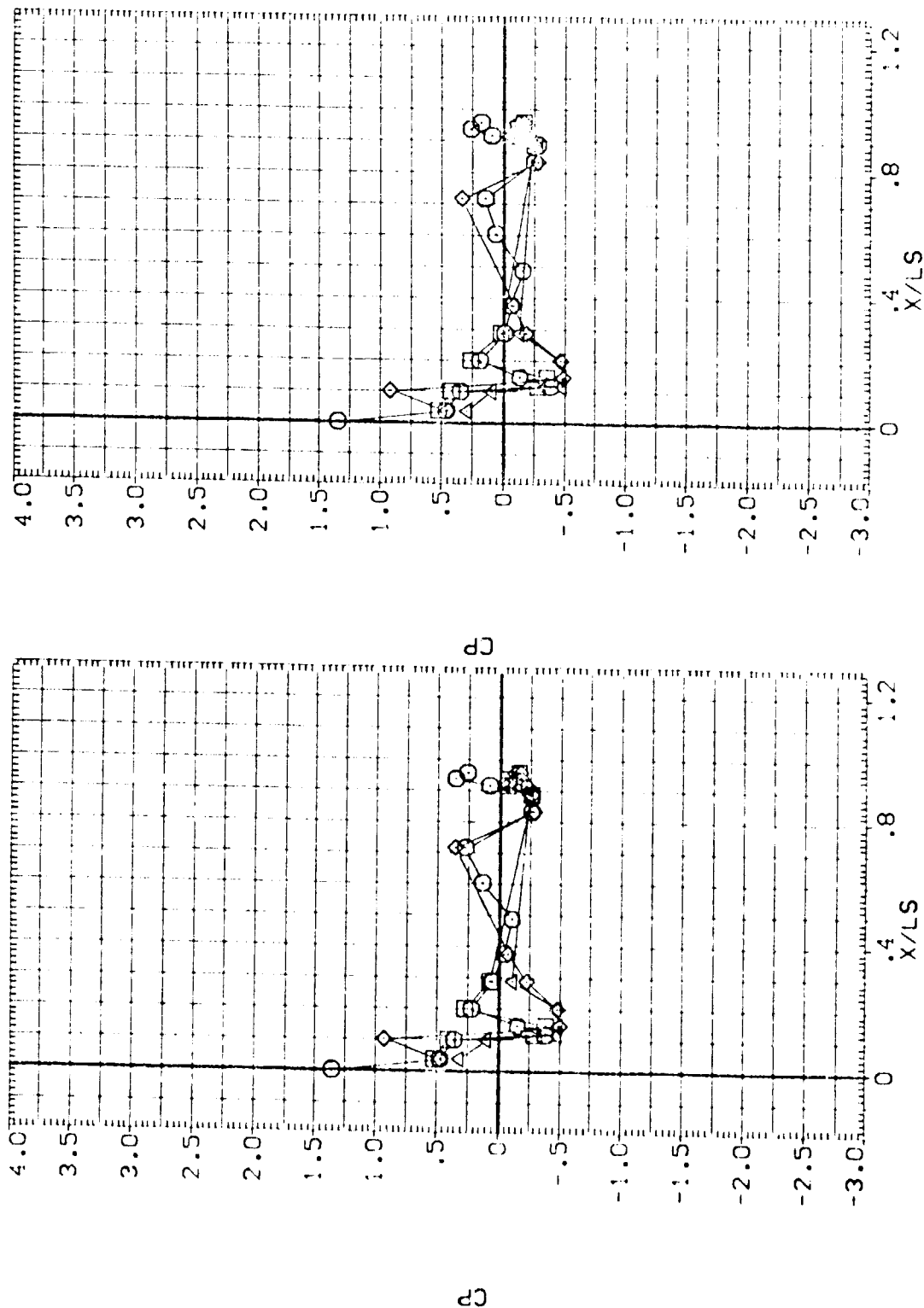
PARAMETRIC VALUES



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1533)

SYMBOL	PHI	BETA0	ALPHA0	MACH	PARAMETRIC VALUES
○	180.000	-2.020	-4.150	1.250	ELEVON .000
□	225.000	-	-	.000	SPDBRK .000
◇	270.000	-	-		
△	315.000	-	-		



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

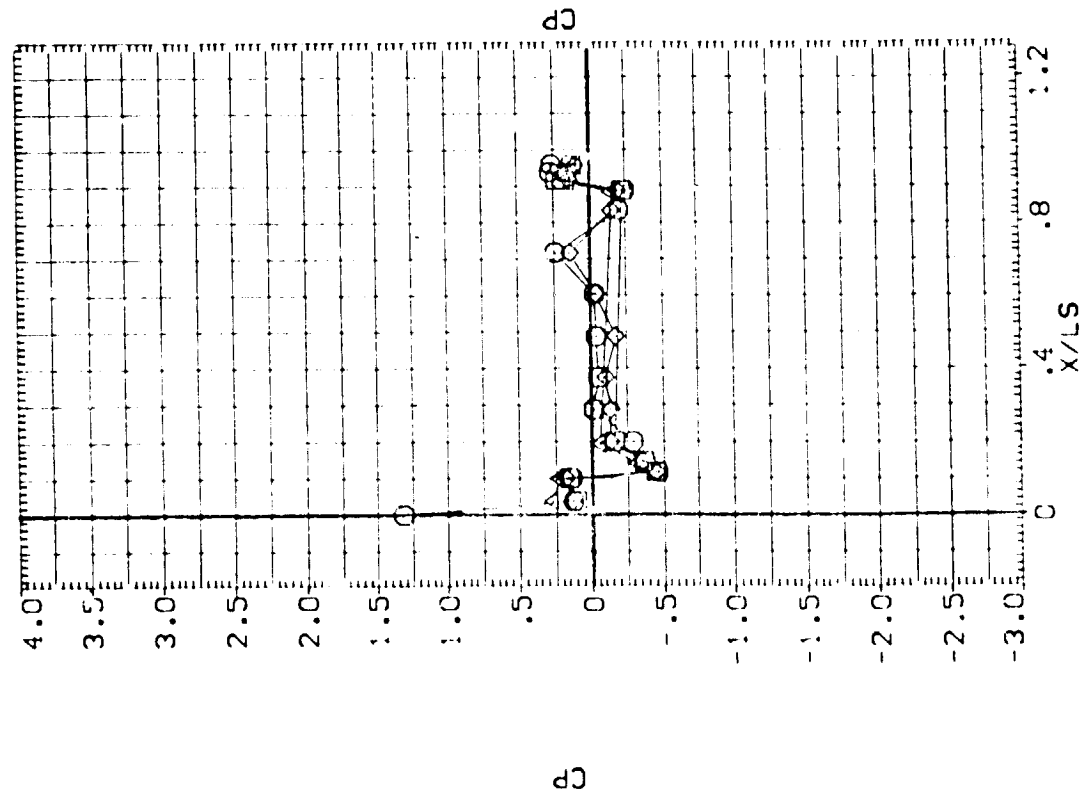
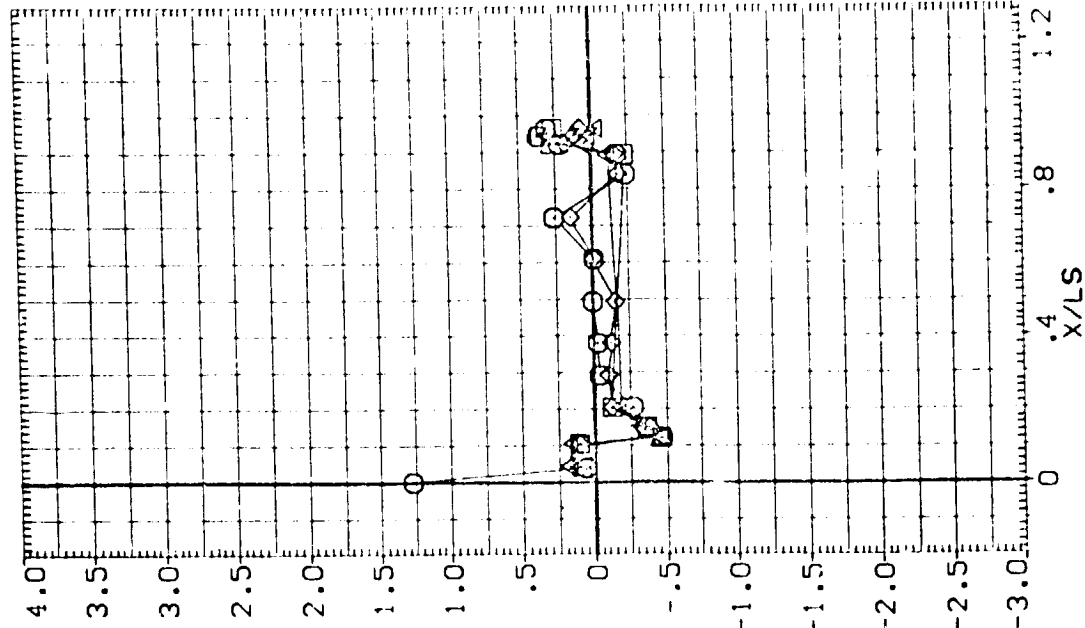
SYMBOL
O
◇
△

PHI
.000
45.000
90.000
135.000

BETA0
4.090
8.060

ALPHA0
-4.200

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPDBRK .000

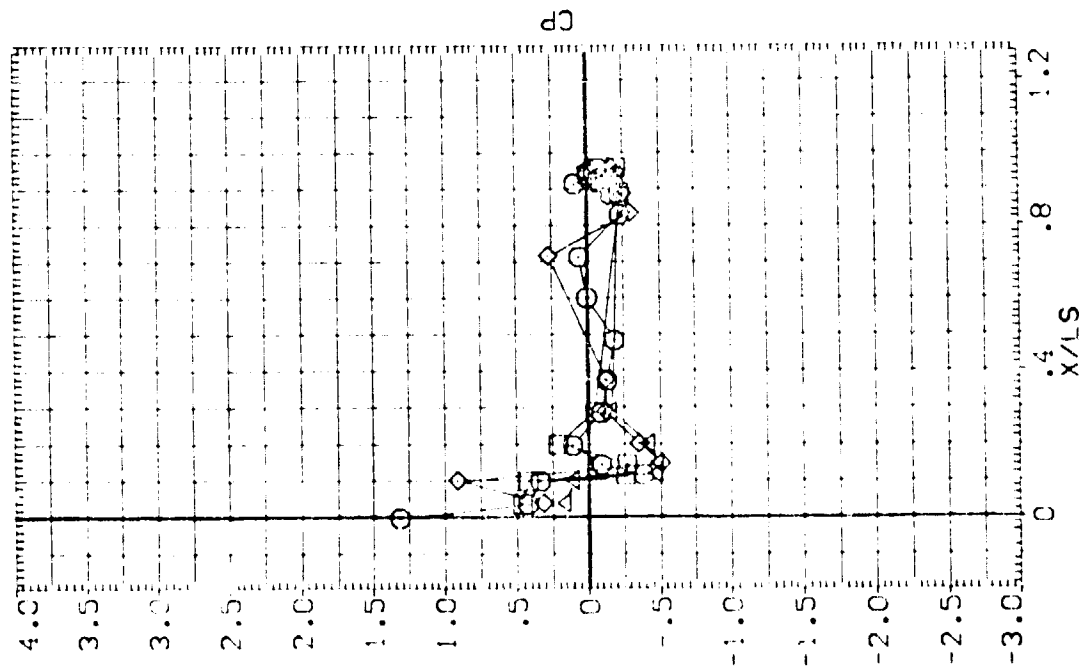
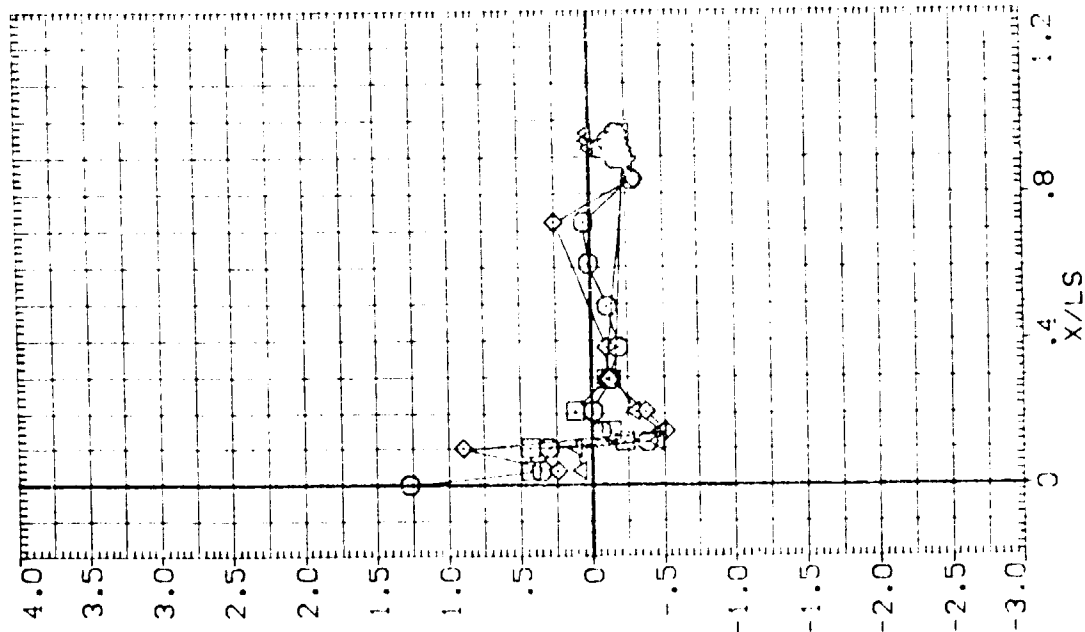


LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:-716 :A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000

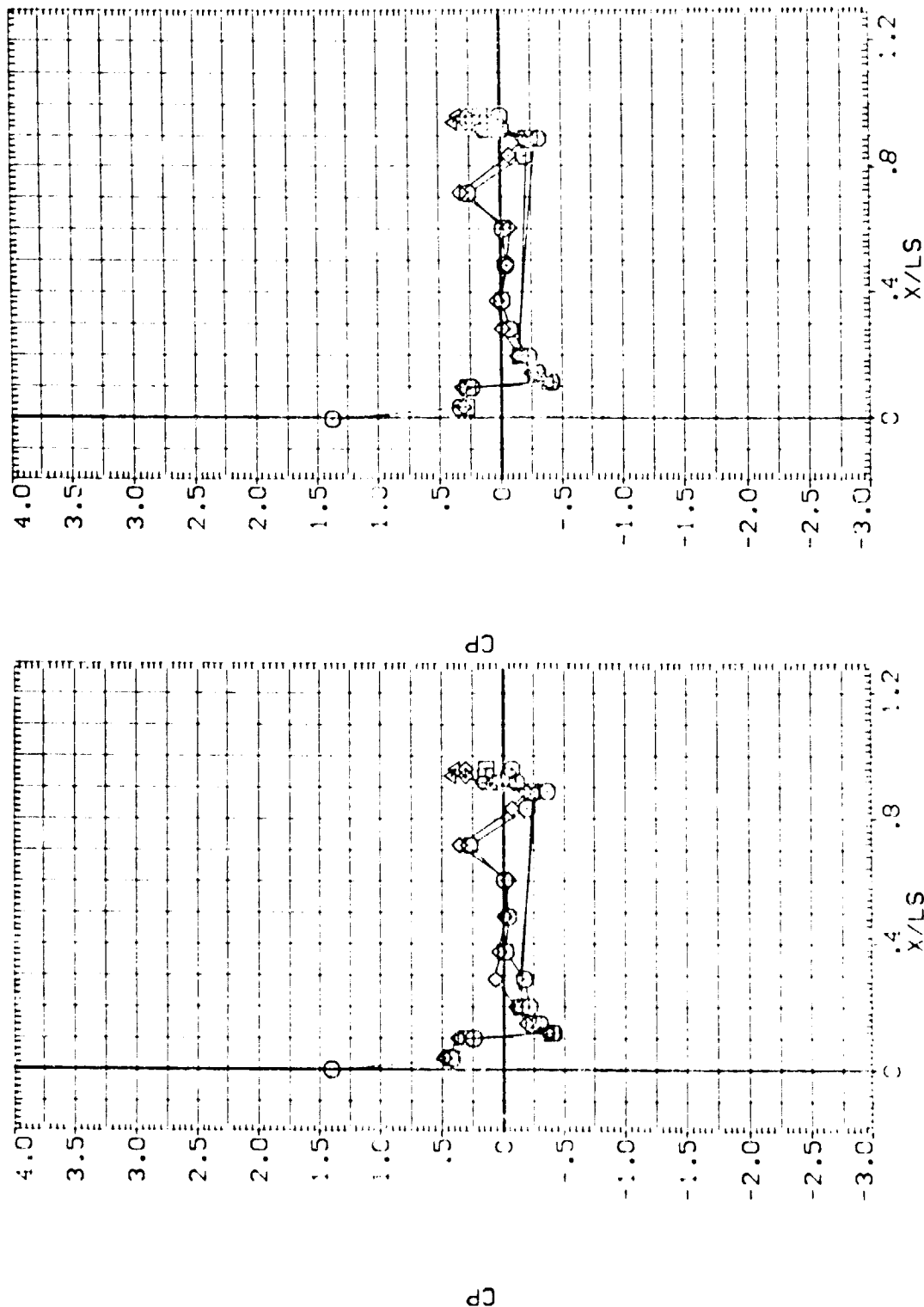
SYMBOL PHI BETA ALPHA
O 180.000 4.090 -4.200
□ 225.000 9.080
△ 270.000 315.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	
○	.000	-8.420	-7.730	1.250	.000	.000
◇	45.000	-4.140		.000	SPDS	.000
△	90.000					
▽	135.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:-7:6 (A14 C:+T12+S12N25+T10 SRM BOOSTER (R31S33))

SYMBOL

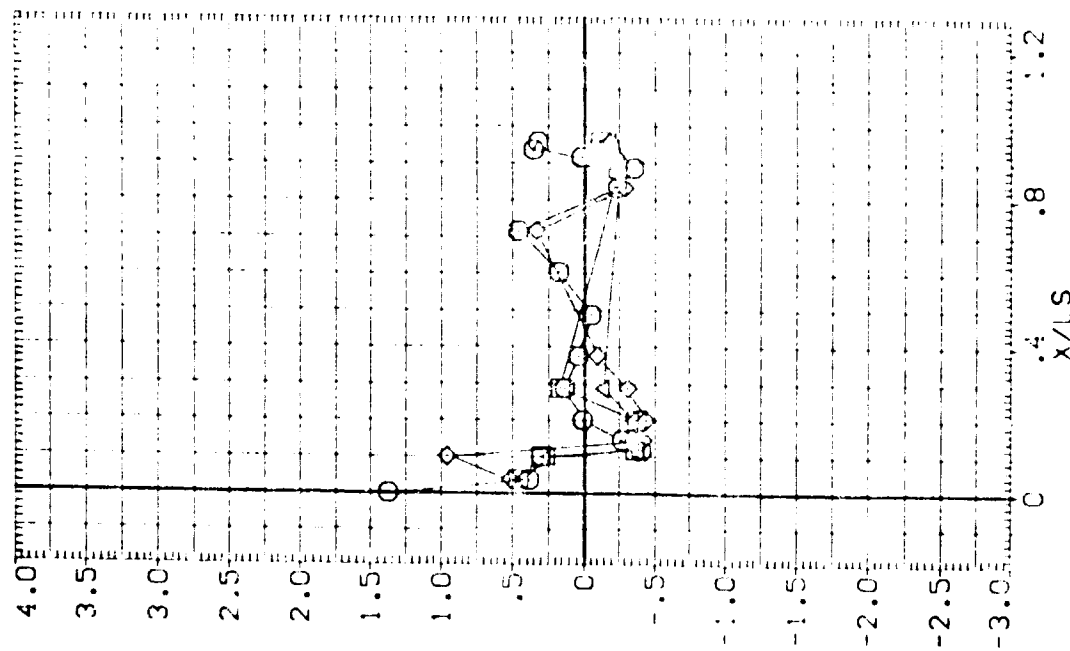
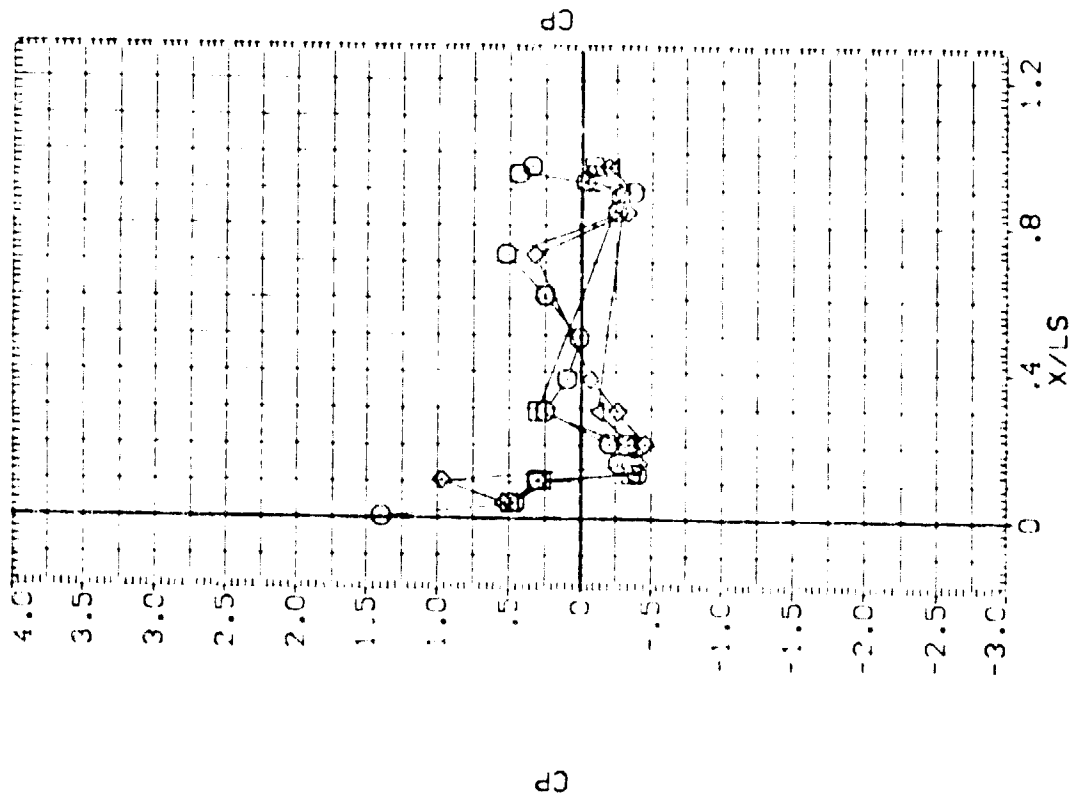
P-1
180.000
275.000
275.000
315.000

BETA0 -8.420
-4.140

ALPHA0 -7.30

MACH
R000R

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOILER
.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

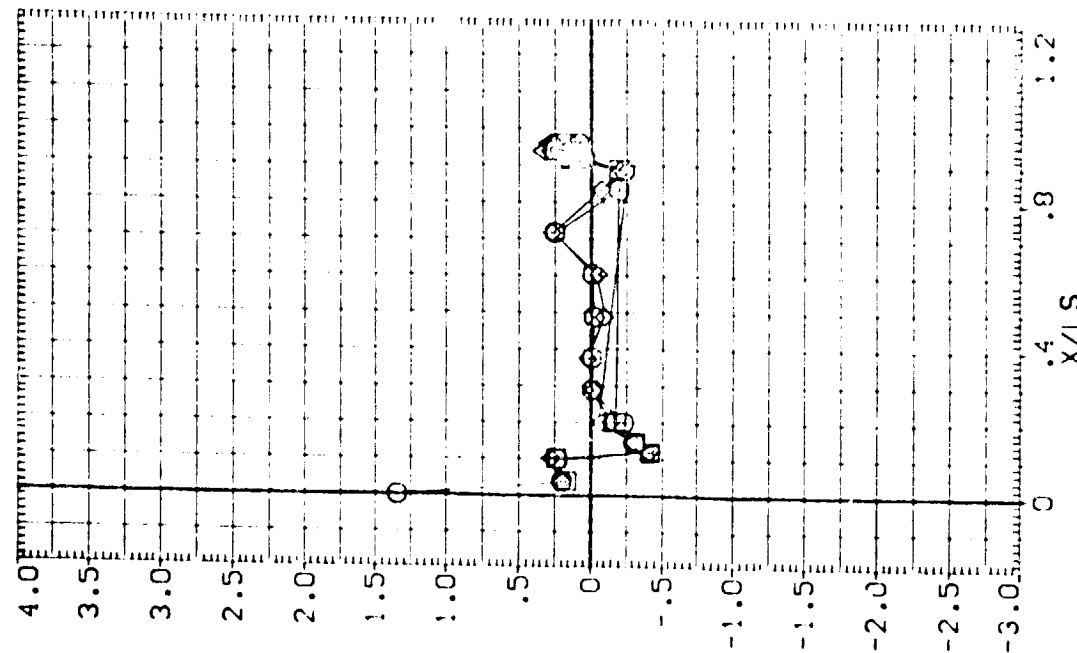
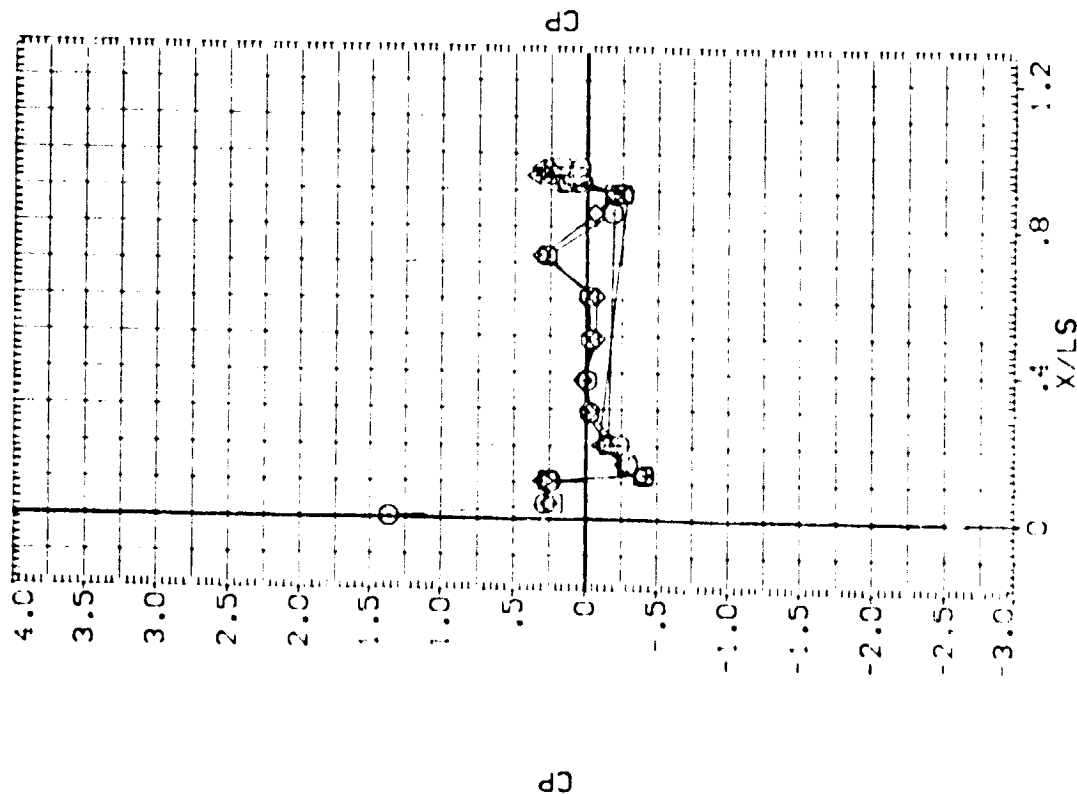
ARC:1-716 1A14 01+T:2+S:2N25+AT10 SRM BOOSTER (RB:533)

SYMBOL
○
◇
△

PMI .000
45.000
90.000
135.000

BETA0 -2.060
ALPHA0 -.700
COC

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPOBRK .000

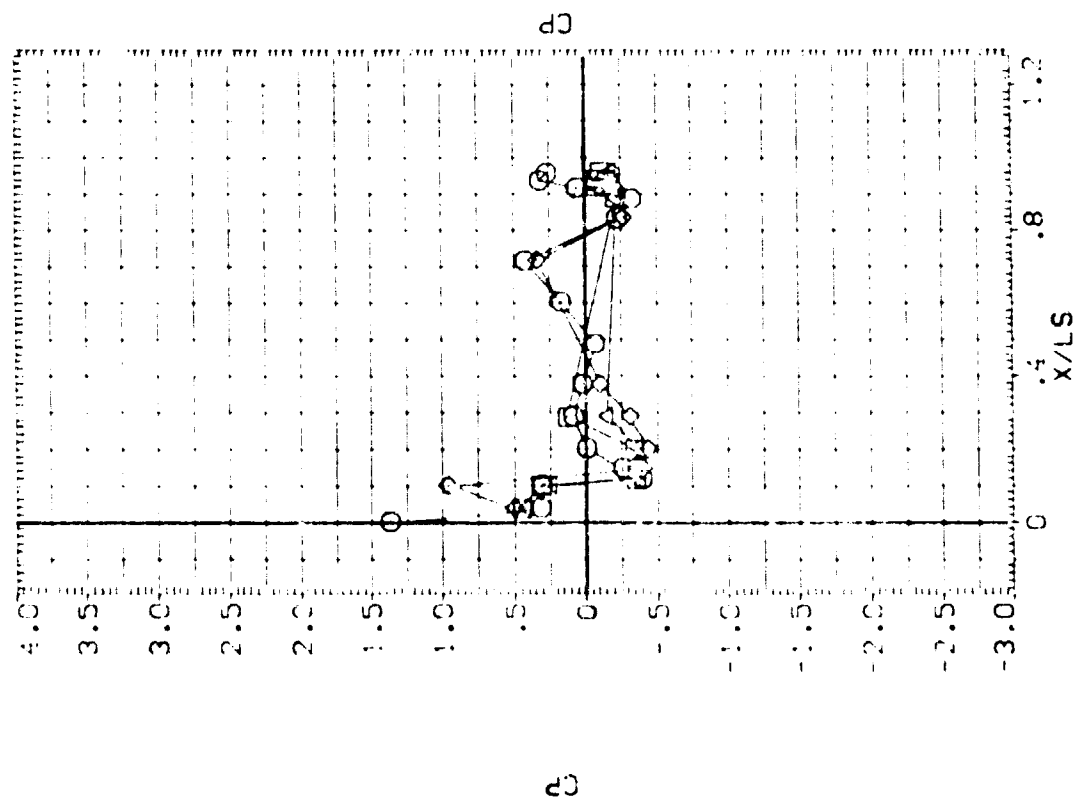
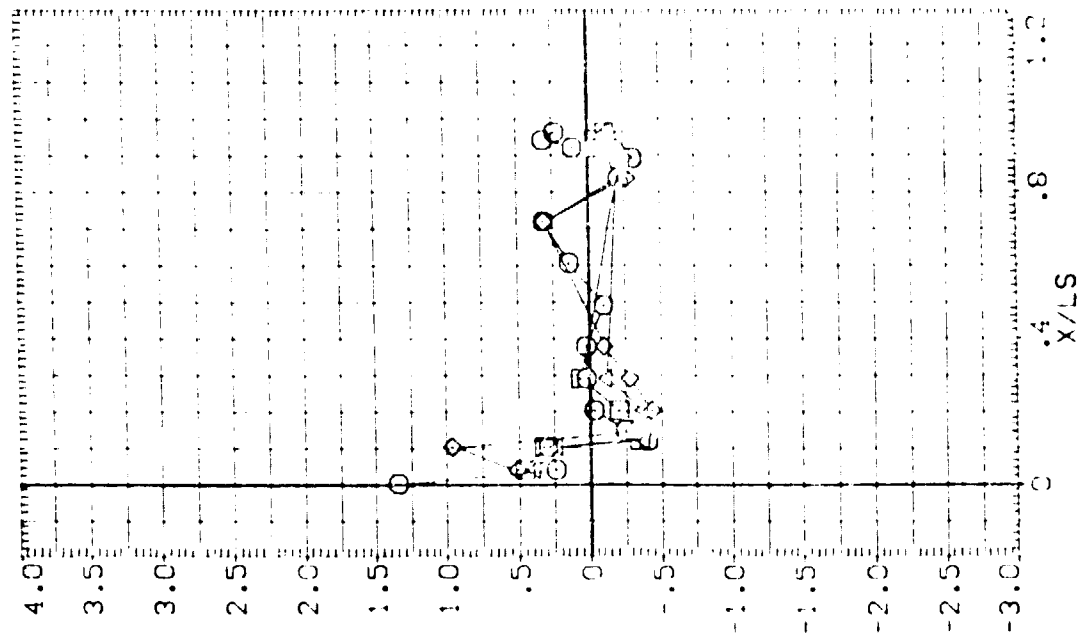


LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:1-716 .A14 01+T12+S12A25+AT10 SRM BOOSTER (R81S33)

PARAMET C VALUES
MACH 1.250 ELEVON .000
RUDDER .000

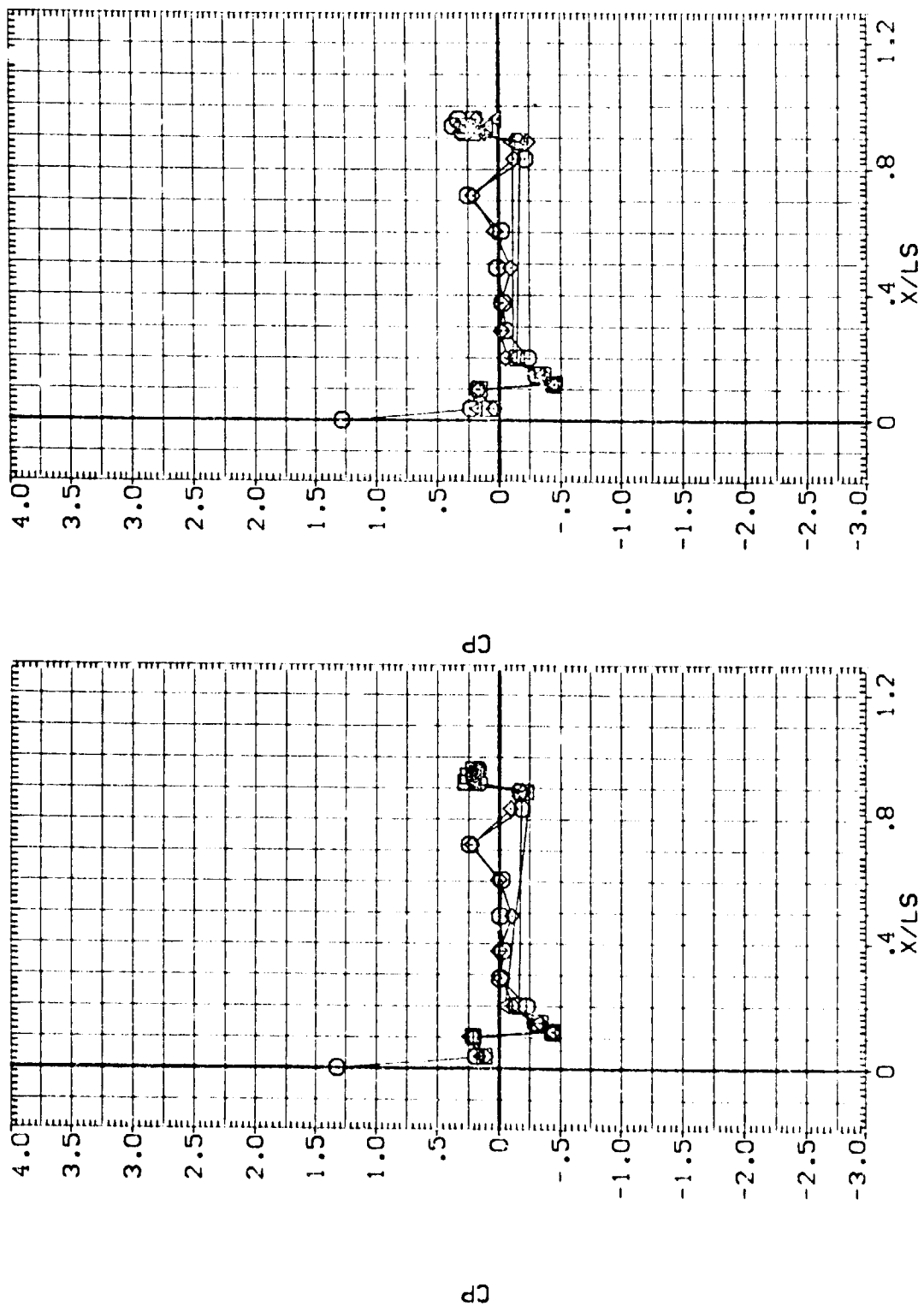
SYMBOL P-11 BETAD ALPHAD
180.000 -2.080 -1.000
225.000 .030
270.000
315.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	
○	.000	4.270	-7.10	1.250	.000	.000
□	45.000	8.130		.000	SPOBRK	.000
◇	90.000					
△	135.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

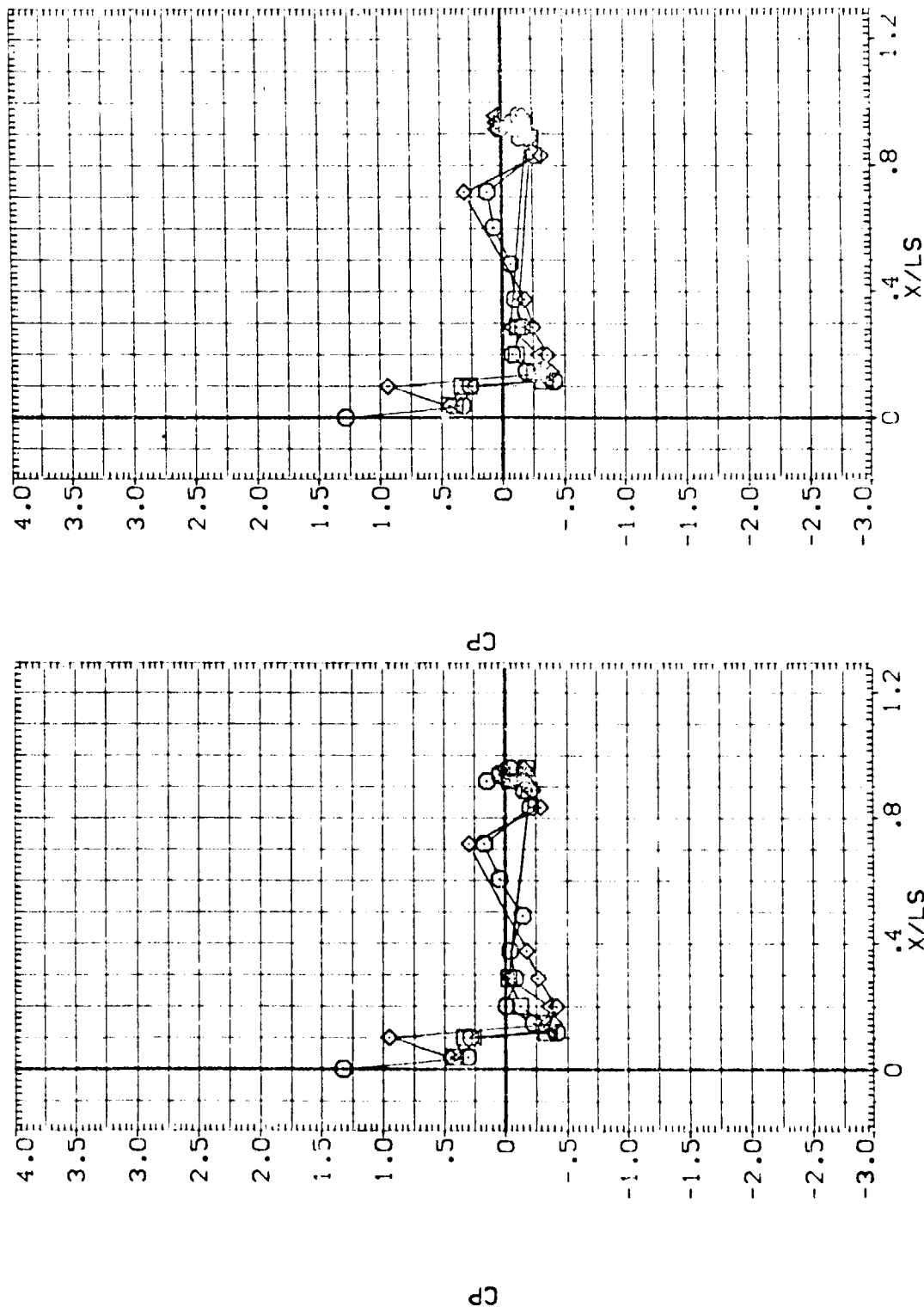
SYMBOL
 ○
 □
 ◇
 △

PHI
 180.000
 225.000
 270.000
 315.000

BETA0
 4.270
 8.130

ALPHA0
 -7.10

PARAMETRIC VALUES
 MACH
 RUDDER
 1.250
 .000
 ELEVON
 SPOBRK
 .000
 .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

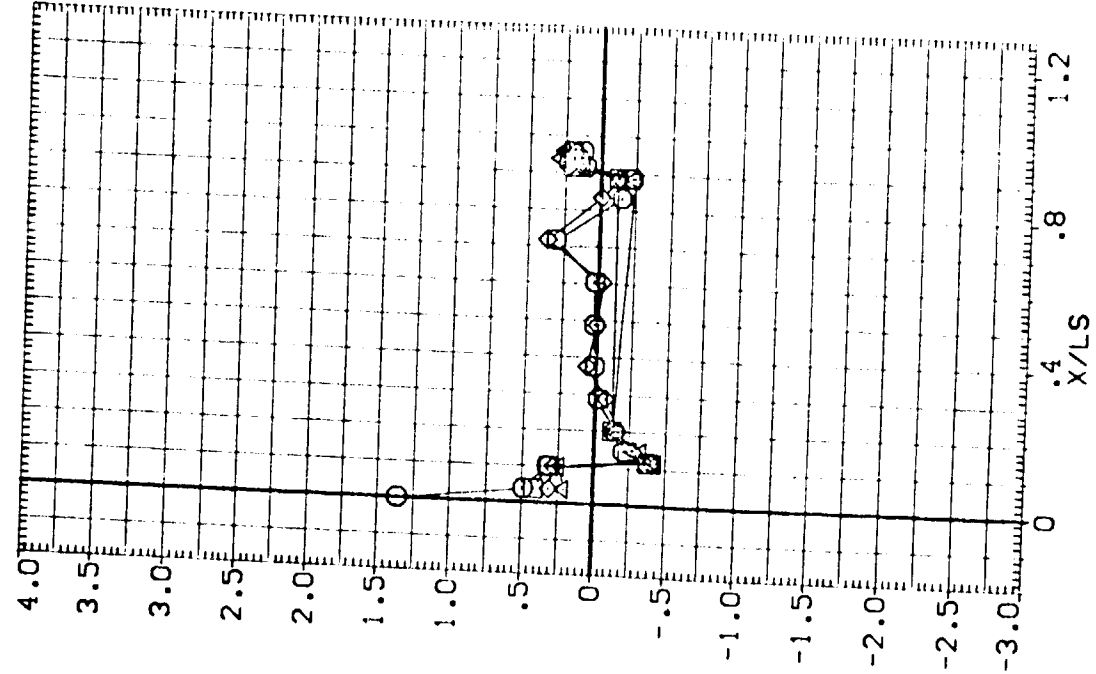
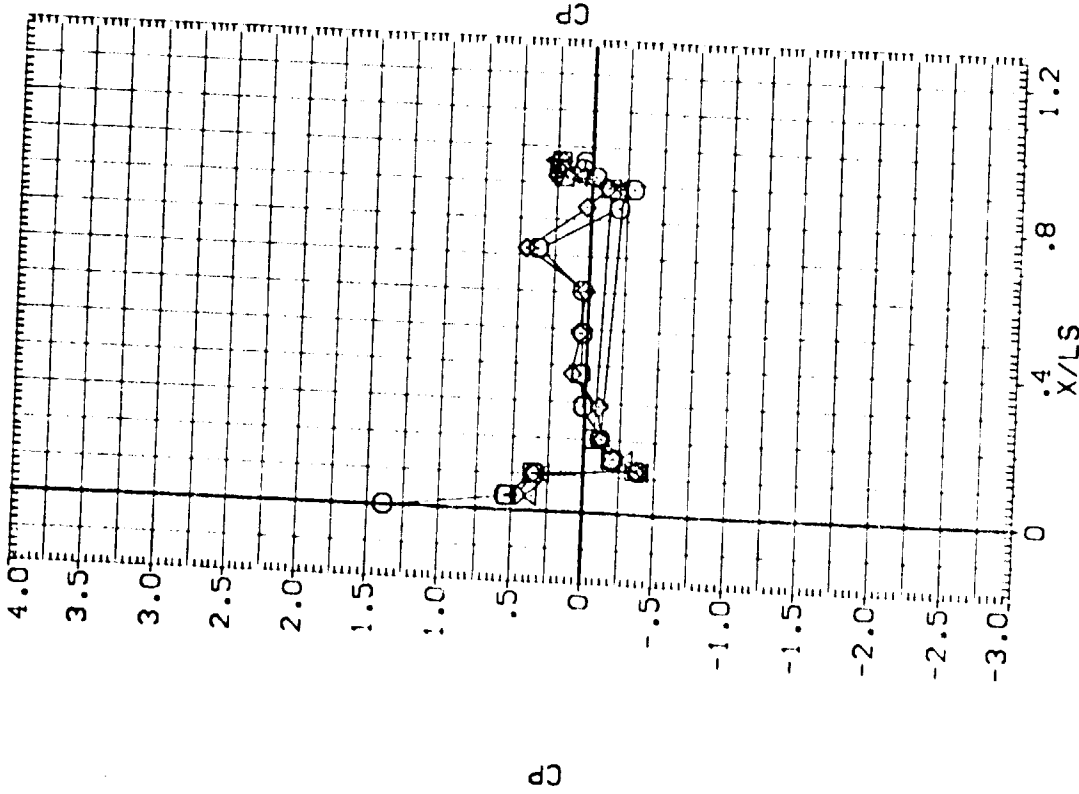
SYMBOL
 ○
 ◇
 △

PHI
 .000
 45.000
 90.000
 135.000

BETA
 -8.090
 -3.970

ALPHA
 4.200

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:-7:6 IAI4 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

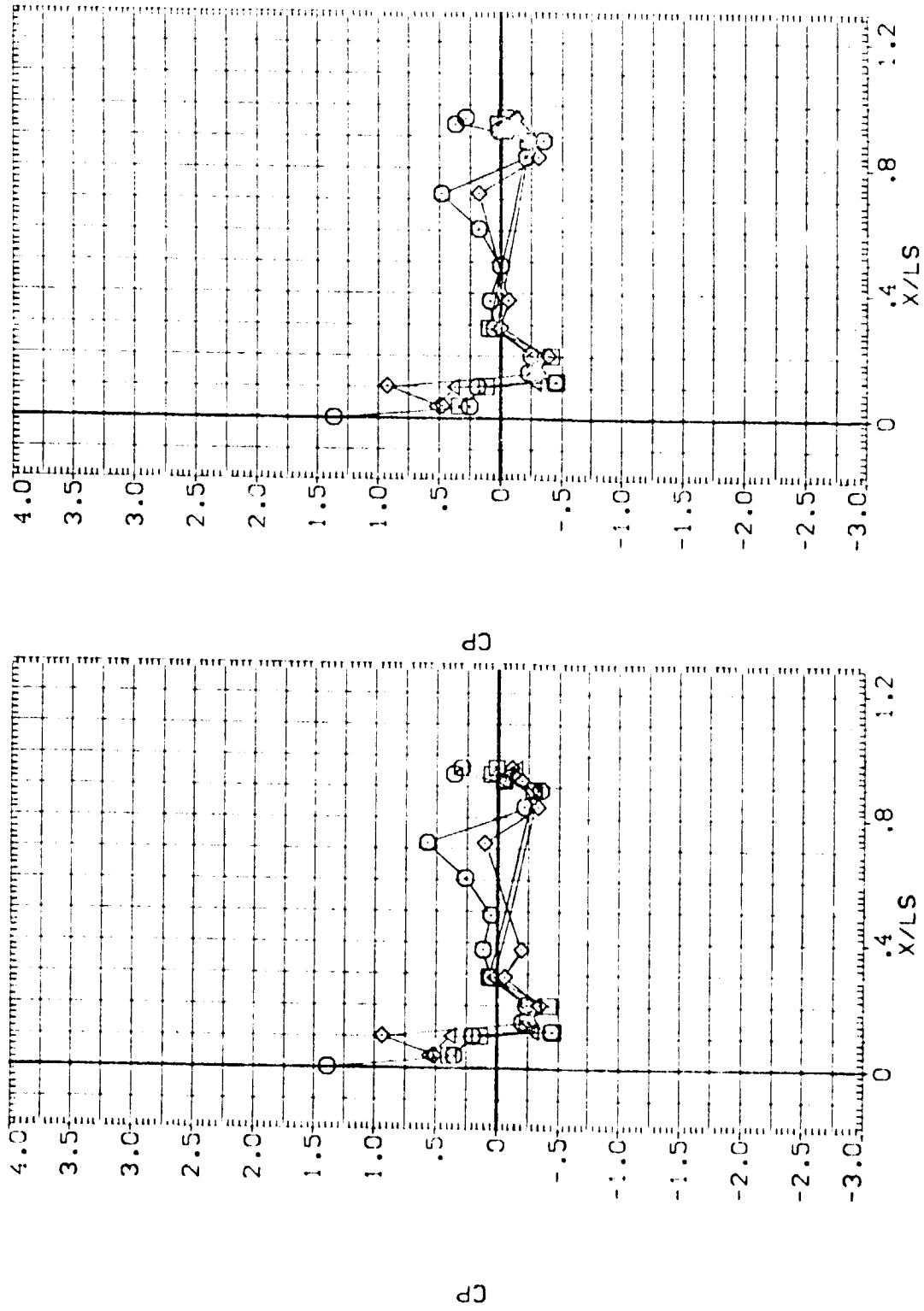
SYMBOL
 ○
 □
 ◇
 △

PHI
 180.000
 225.000
 270.000
 315.000

BETA0
 -8.090
 -3.970

ALPHA0
 4.200

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

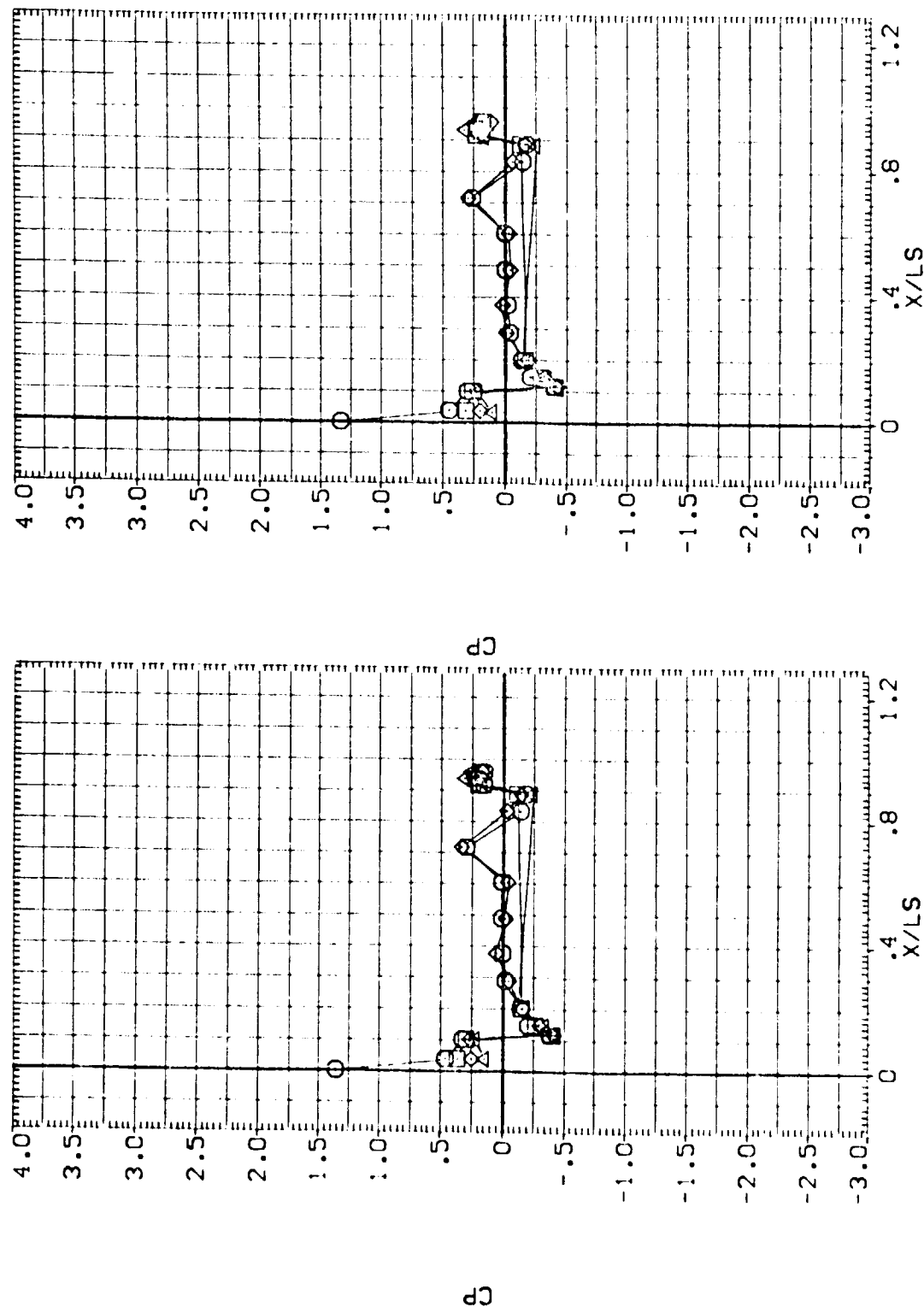
SYMBOL
 ○ □ ◇ △

PHI .000
 45.000
 90.000
 135.000

BETA0
 -2.000
 -.070

ALPHA0
 4.220

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPDBRK .000

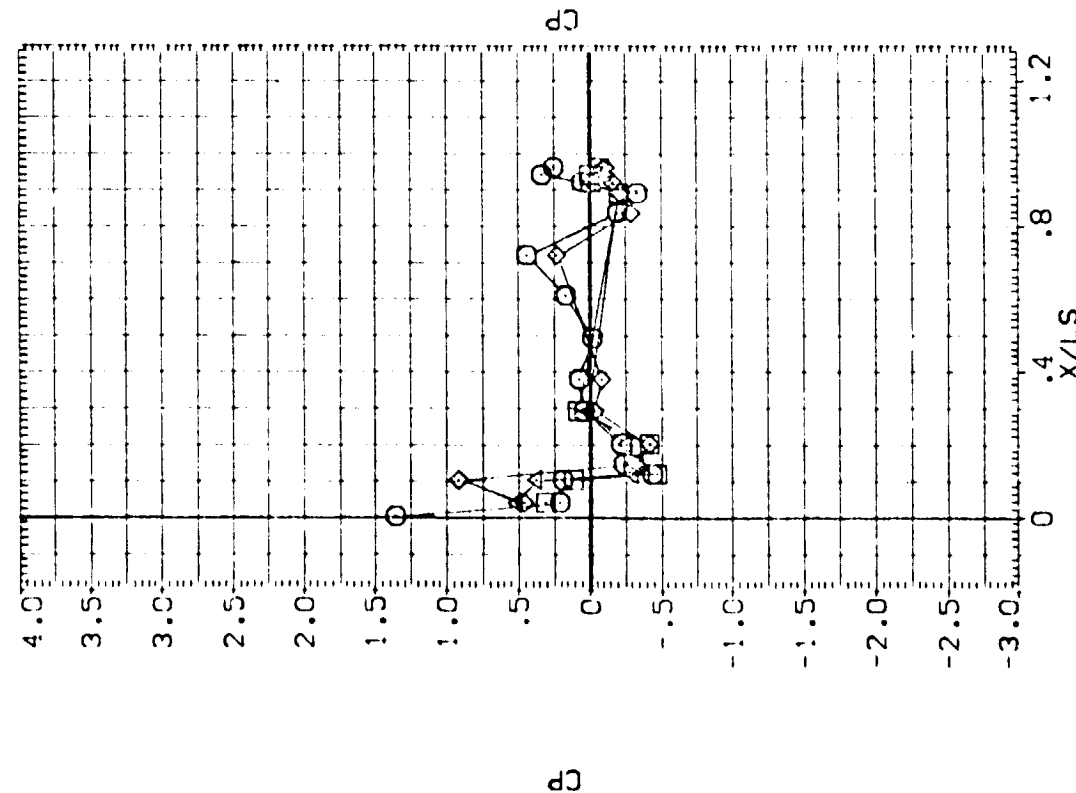
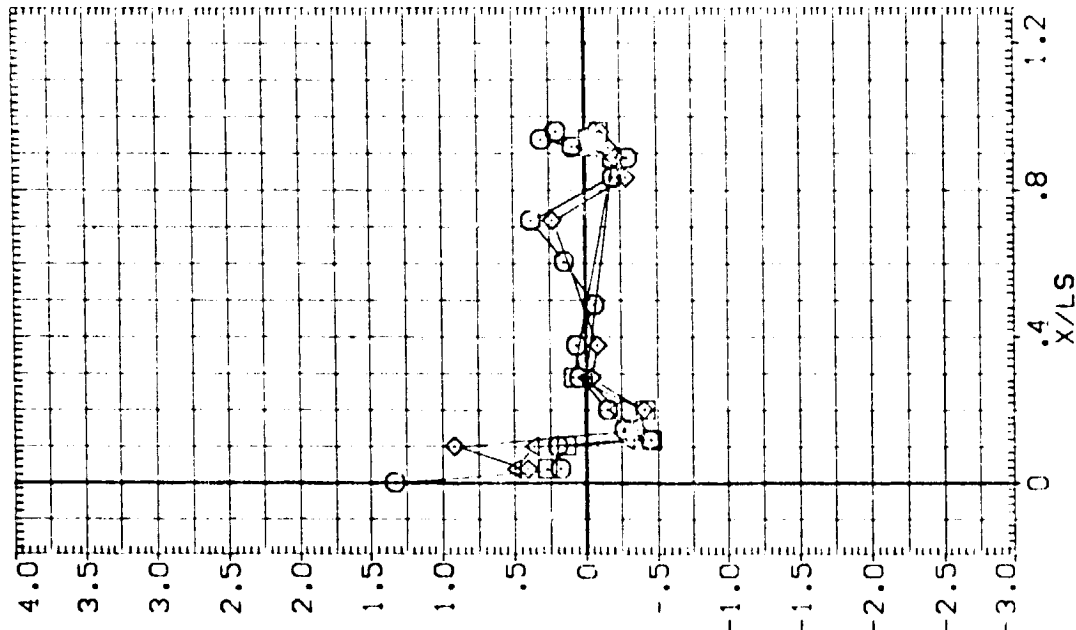


LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000

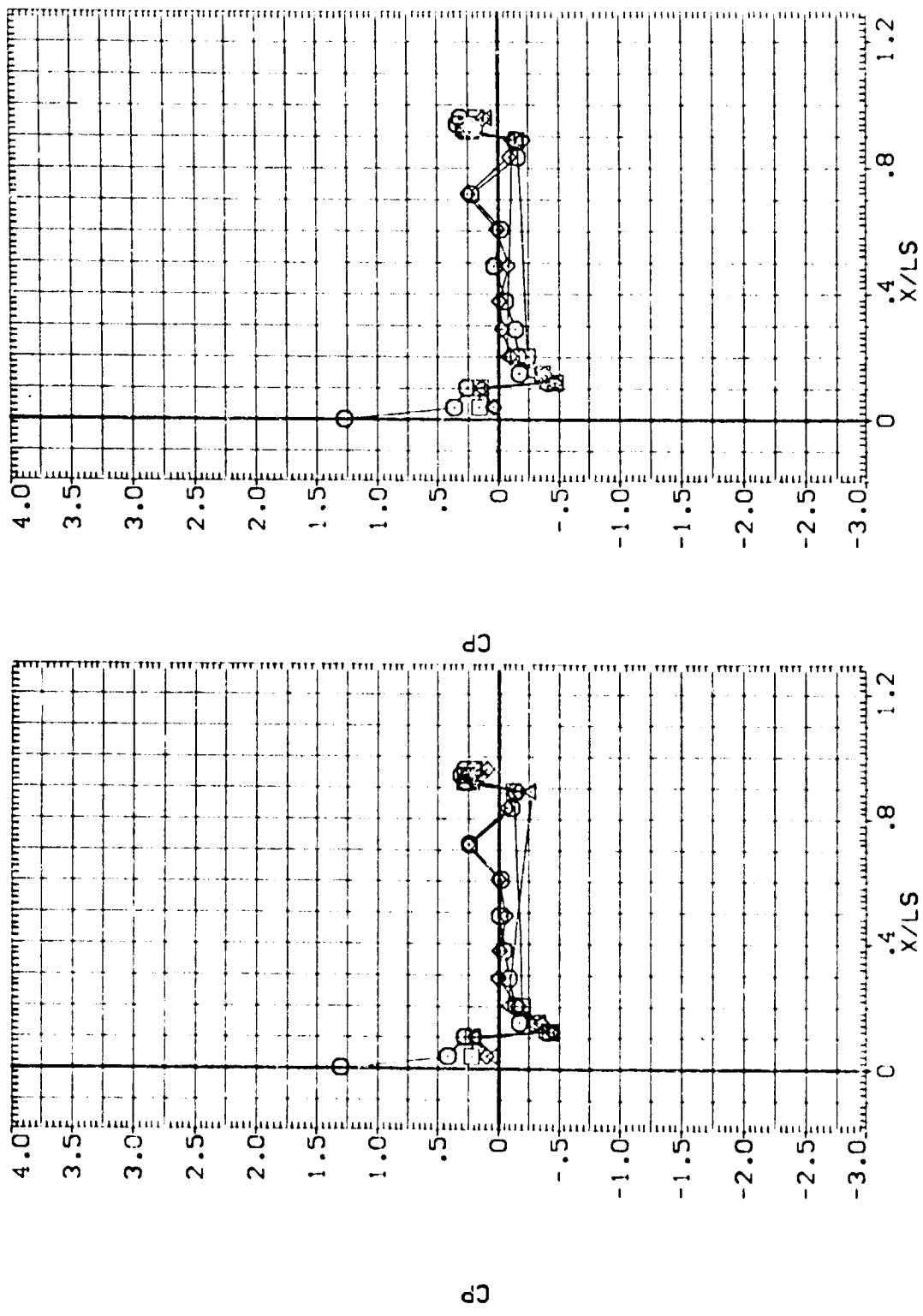
SYMBOL P-1 BETA0 ALPHA0
180.000 -2.000 4.220
225.000
270.000
315.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL	PHI	BETA	ALPHA	MACH	PARAMETRIC VALUES
○	.000	4.100	4.430	RUDER	1.250 ELEVON .000
□	45.000	8.150			.000 SPDRK .000
◇	90.000				
△	135.000				



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+712+S12N25+AT10 SRM BOOSTER (RB:S33)

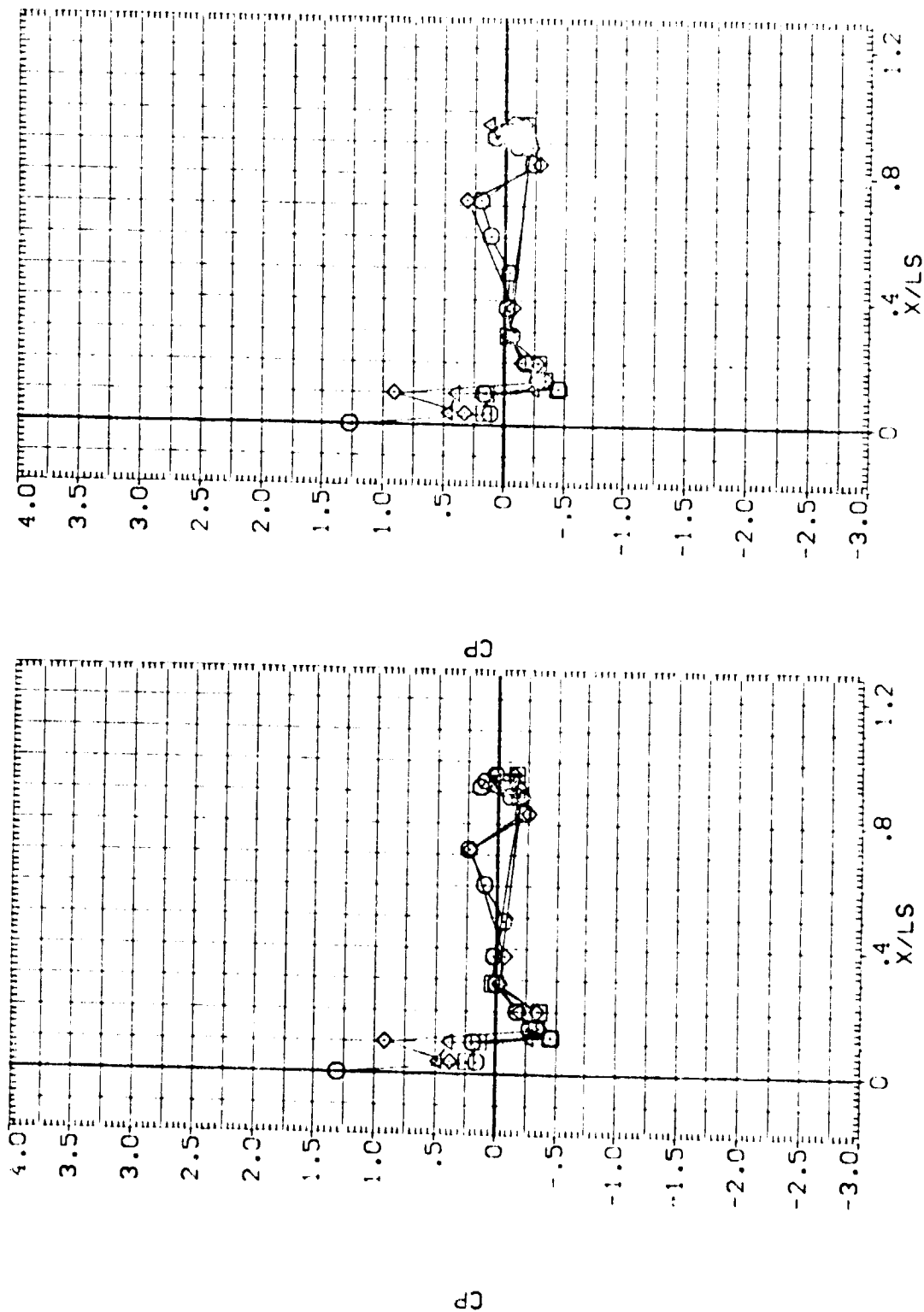
SYMBOL

PHI 180.000
275.000
270.000
315.000

BETA0 4.100
8.150

ALPHA0 4.430

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPDRK .000



ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL

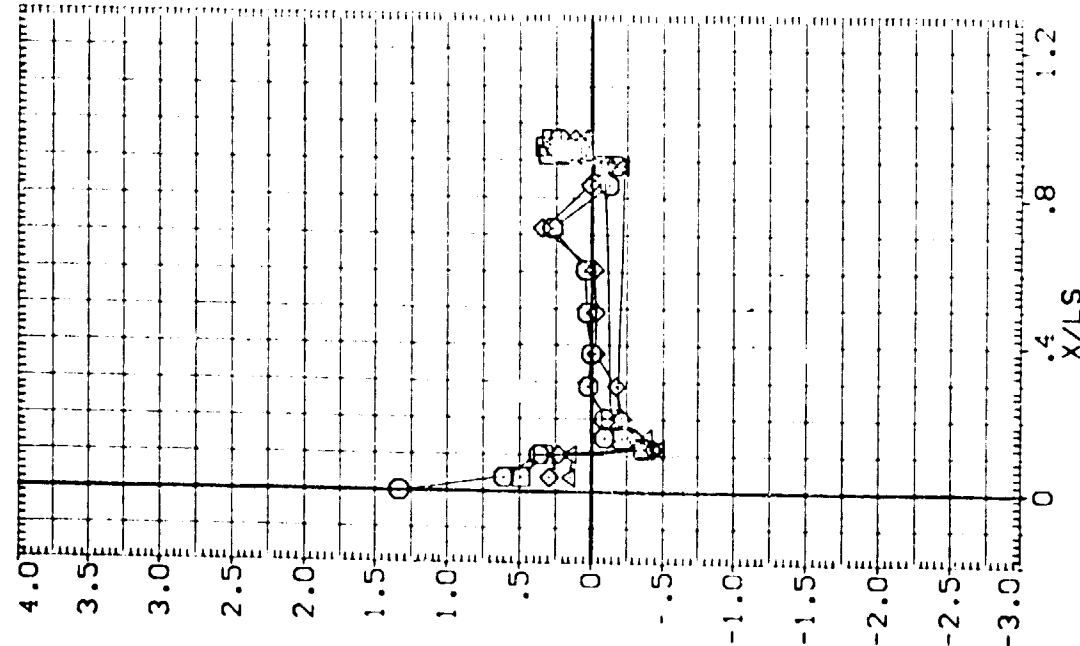
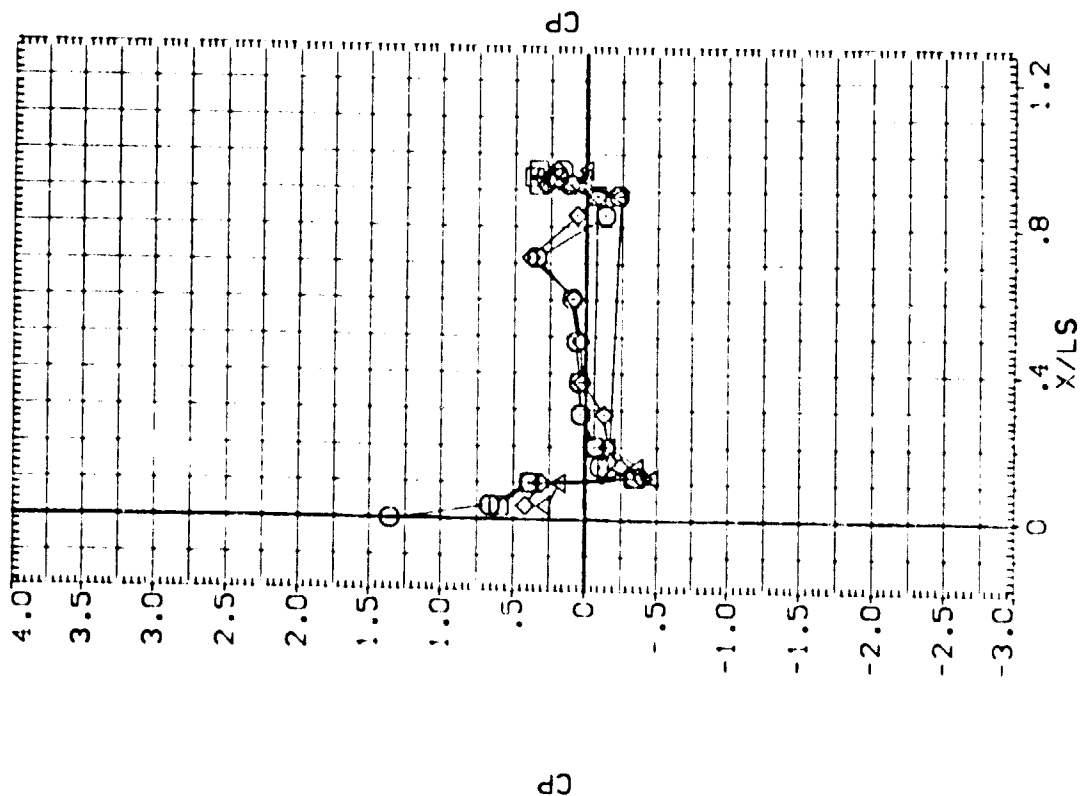
○ □ ◇ △

PHI .000
45.000
90.000
135.000

BETA0 -8.030
-4.000

ALPHA0 7.930

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

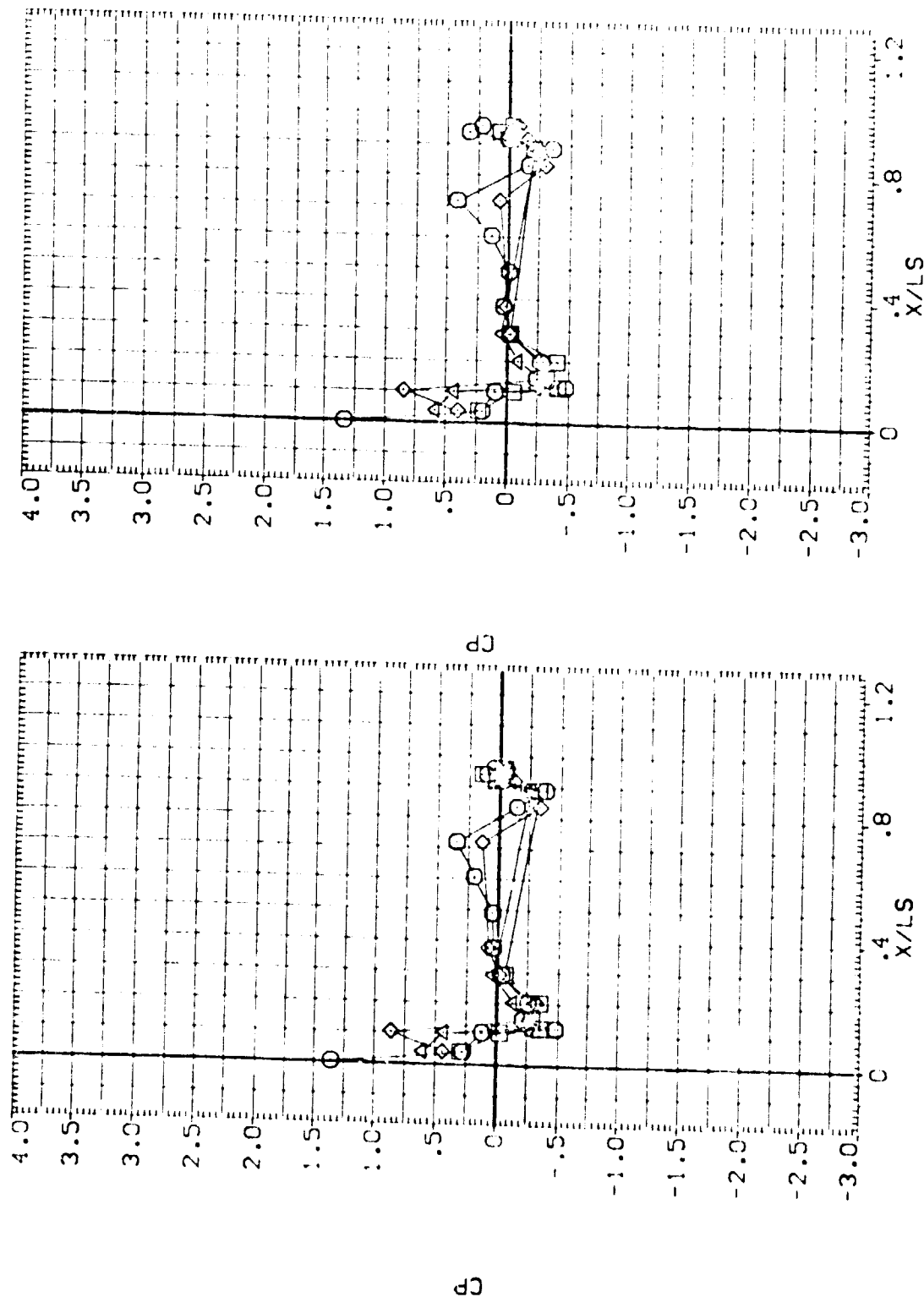
SYMBOL

180.000
225.000
270.000
315.000

BETA0
-8.030
-4.000

ALPHA0
7.930

PARAMETRIC VALUES
MACH 1.250 ELEV'N .000
R.O.D.R .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

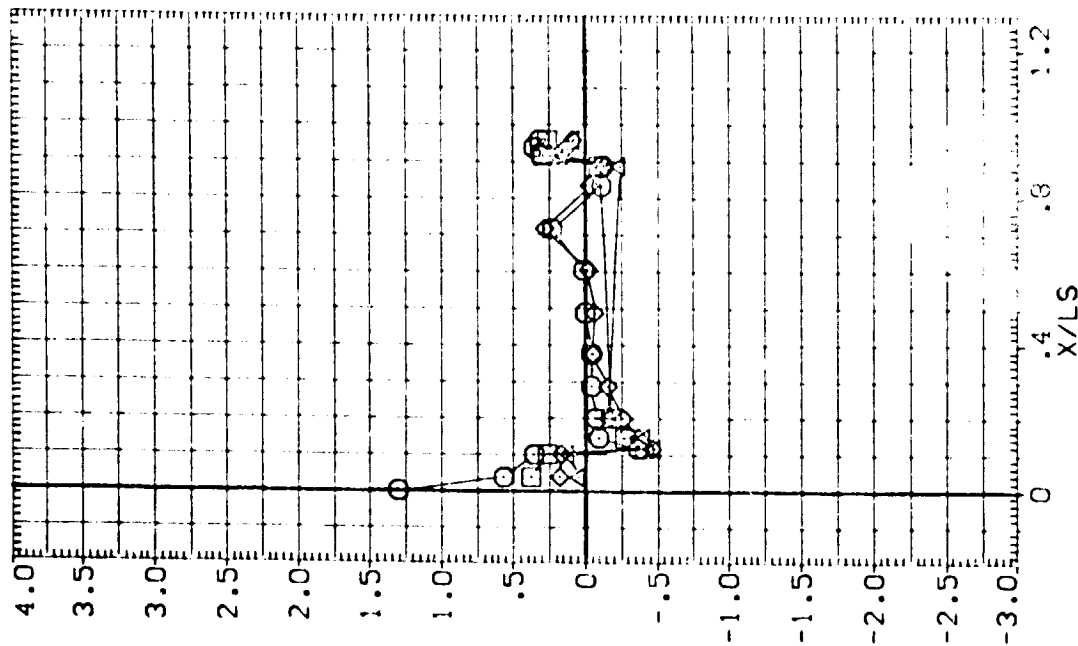
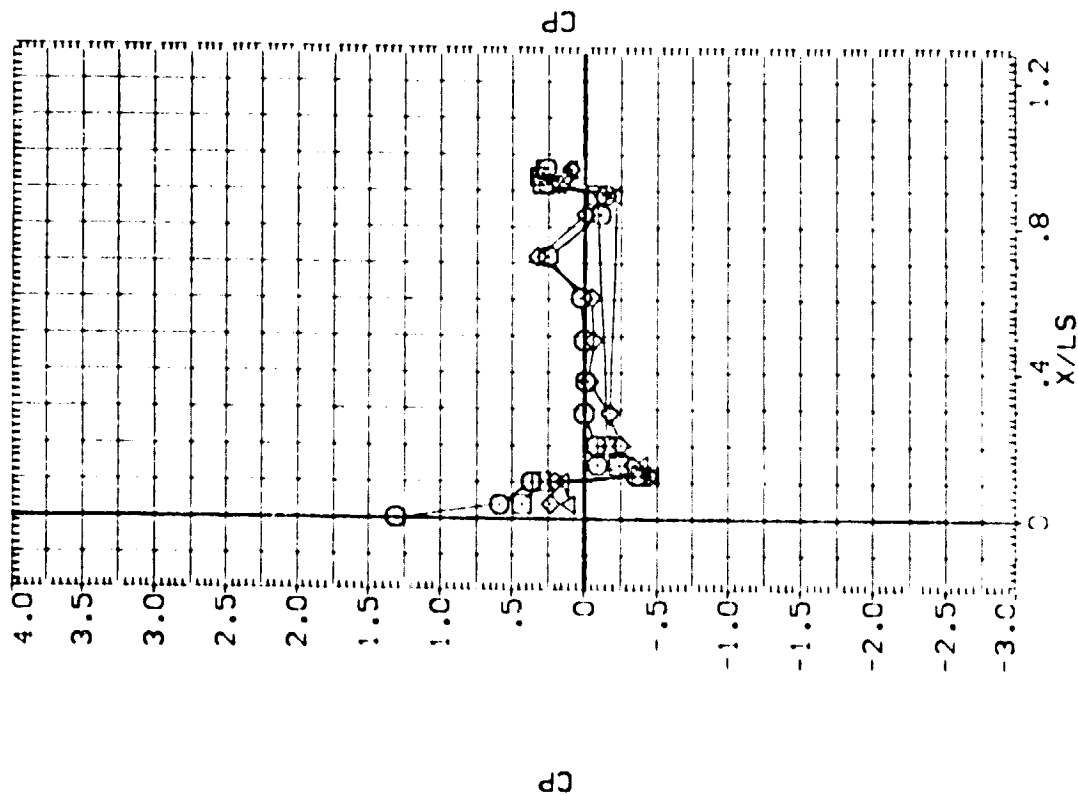
SYMBOL
 O
 X
 Δ

PHI .000
 45.000
 90.000
 135.000

BETA0 -2.030
 .040

ALPHA0 7.830

PARAMETRIC VALUES
 MACH 1.250
 ELEVON .000
 RUDDER .000
 SPDRK .000



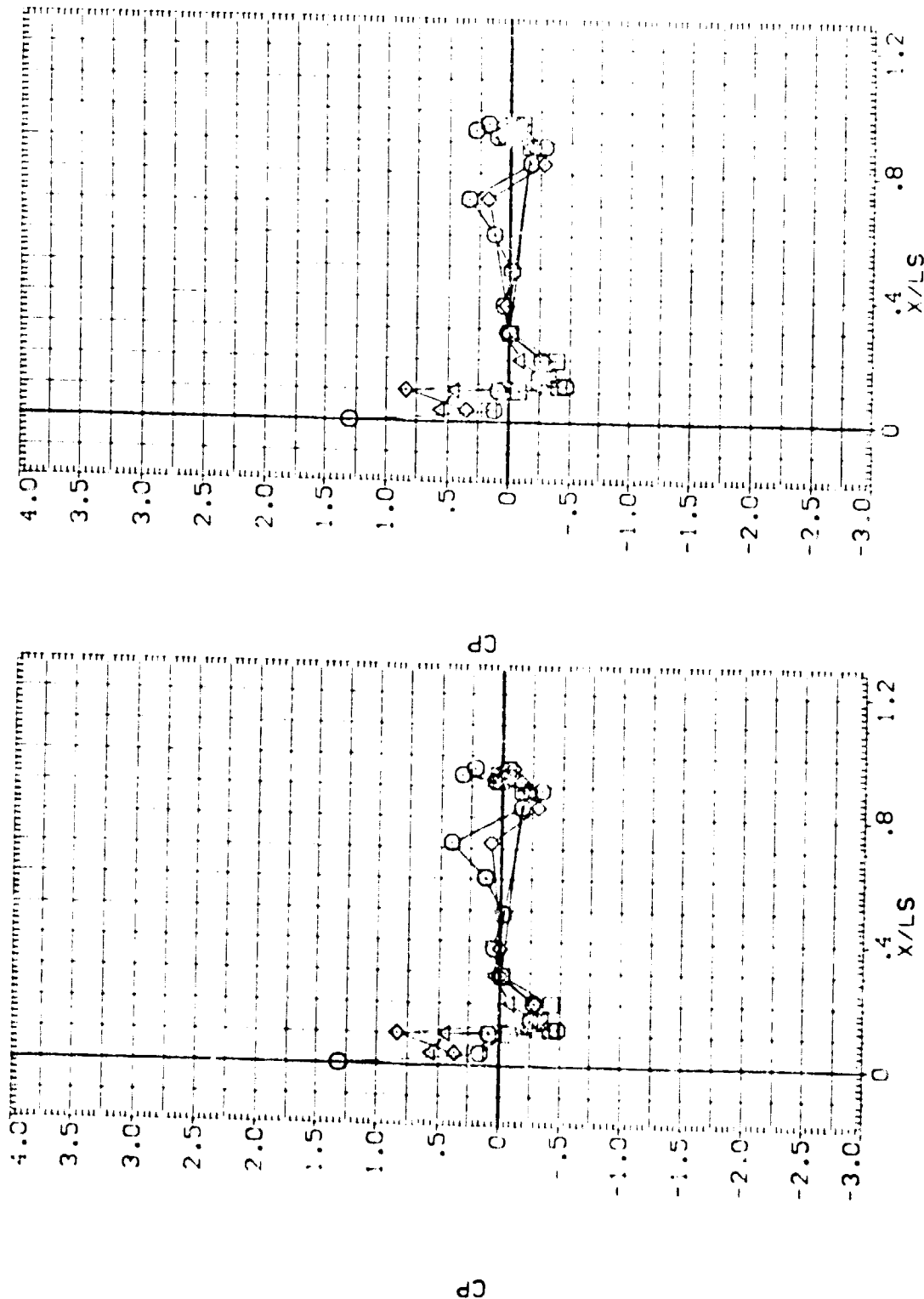
LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+112 312N25+AT10 SRM BOOSTER (RB1S33)

SYMBOL
 O 180.000
 □ 225.000
 ◇ 270.000
 △ 315.000

BETA0 ALPHA0
 -2.030 7.830
 .040

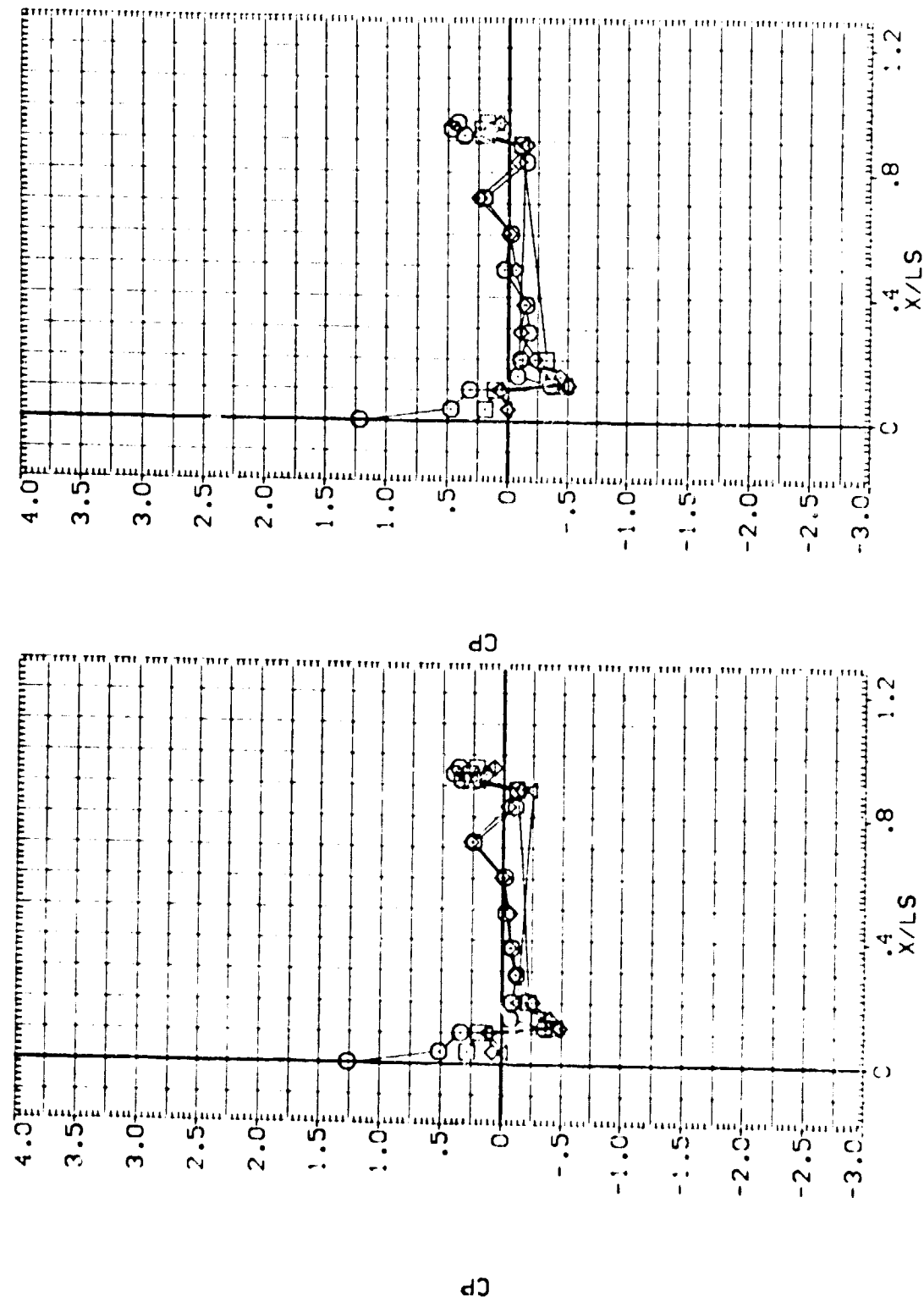
PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOILER .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM BOOSTER (RB1S33)

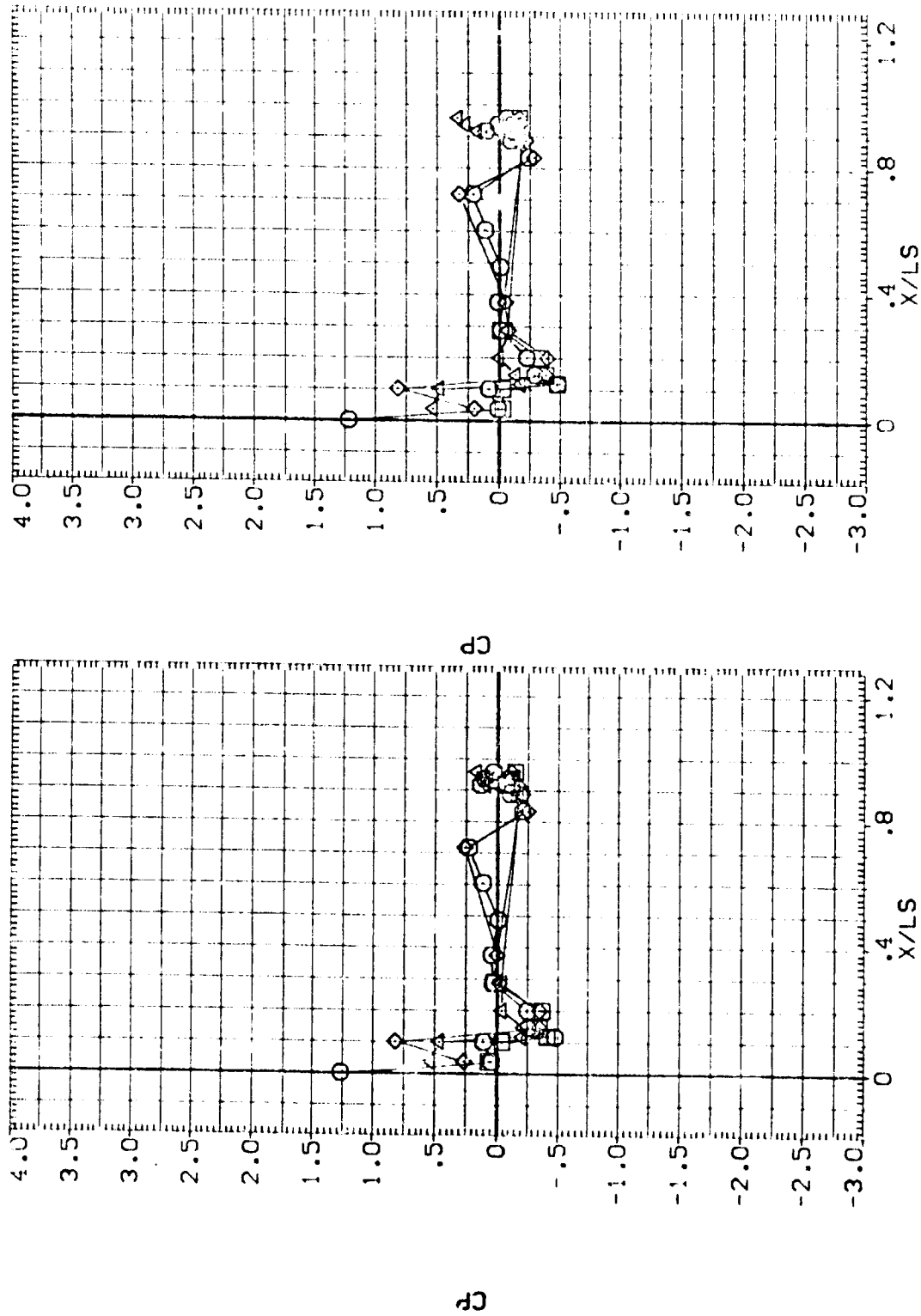
SYMBOL	PHI	BETA	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	SPOILER
○	.000	4.060	7.870	1.250	.000	.000
◇	45.000	8.110		.000		
△	90.000					
	135.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL PHI BETAJ ALPHAQ
 180.000 4.060 7.870
 225.000 8.110
 270.000
 315.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S34)

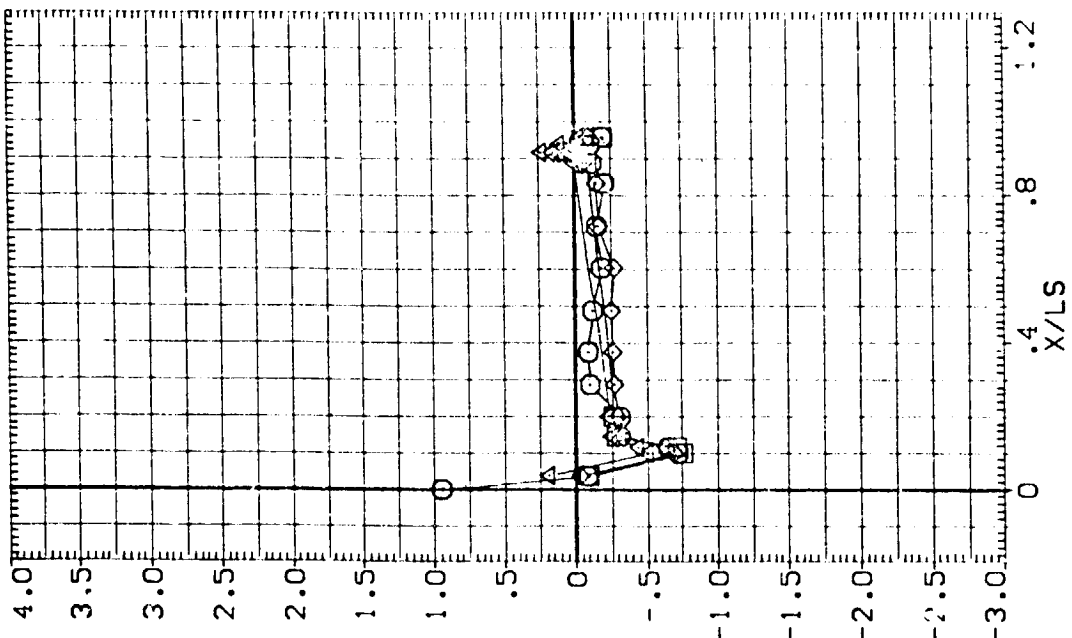
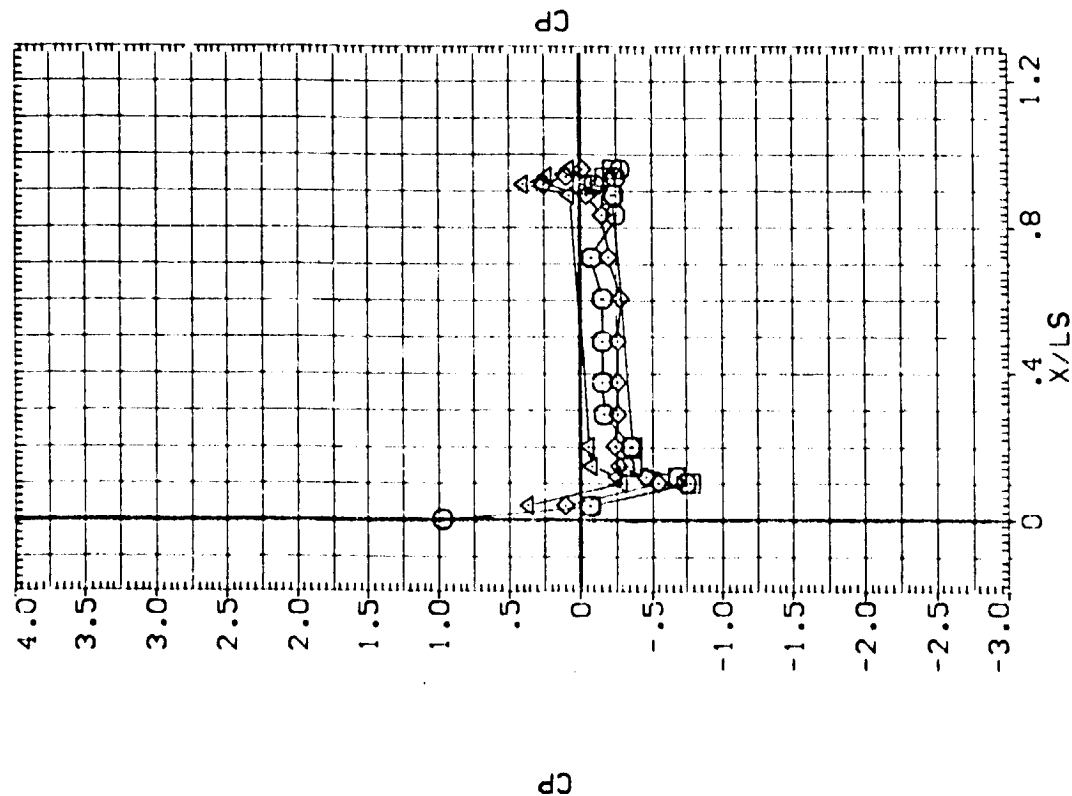
SYMBOL
 ○ □ ◇ △

P41
 .000
 45.000
 90.000
 135.000

BETAT
 -8.070
 .010

ALPHAT
 -8.360

PARAMETRIC VALUES
 MACH .600
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S34)

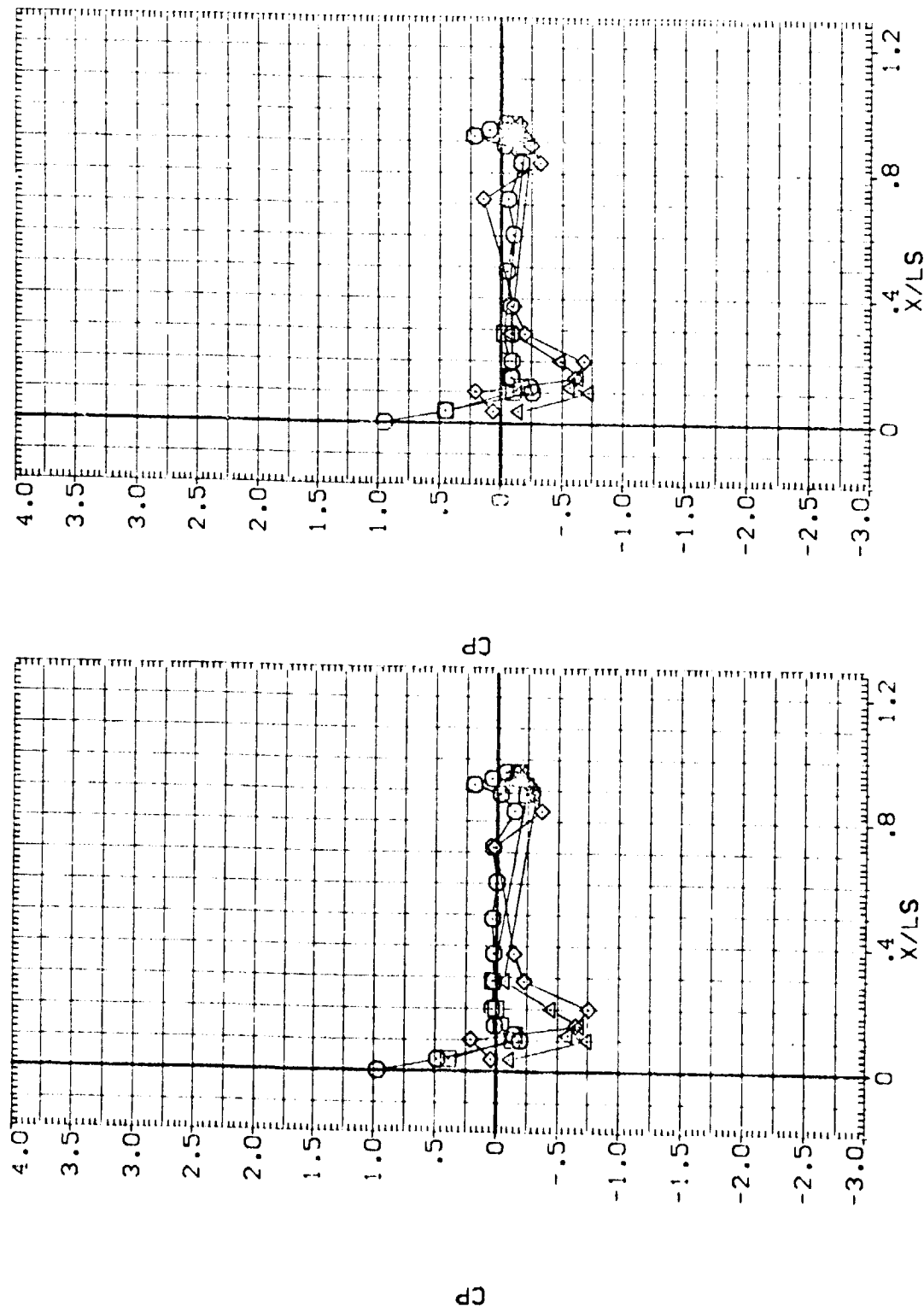
SYMBOL
 ○
 □
 ◇
 △

PHI
 180.000
 225.000
 270.000
 315.000

BETAT
 -8.070
 .010

ALPHAT
 -8.360

PARAMETRIC VALUES
 MACH .600
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S34)

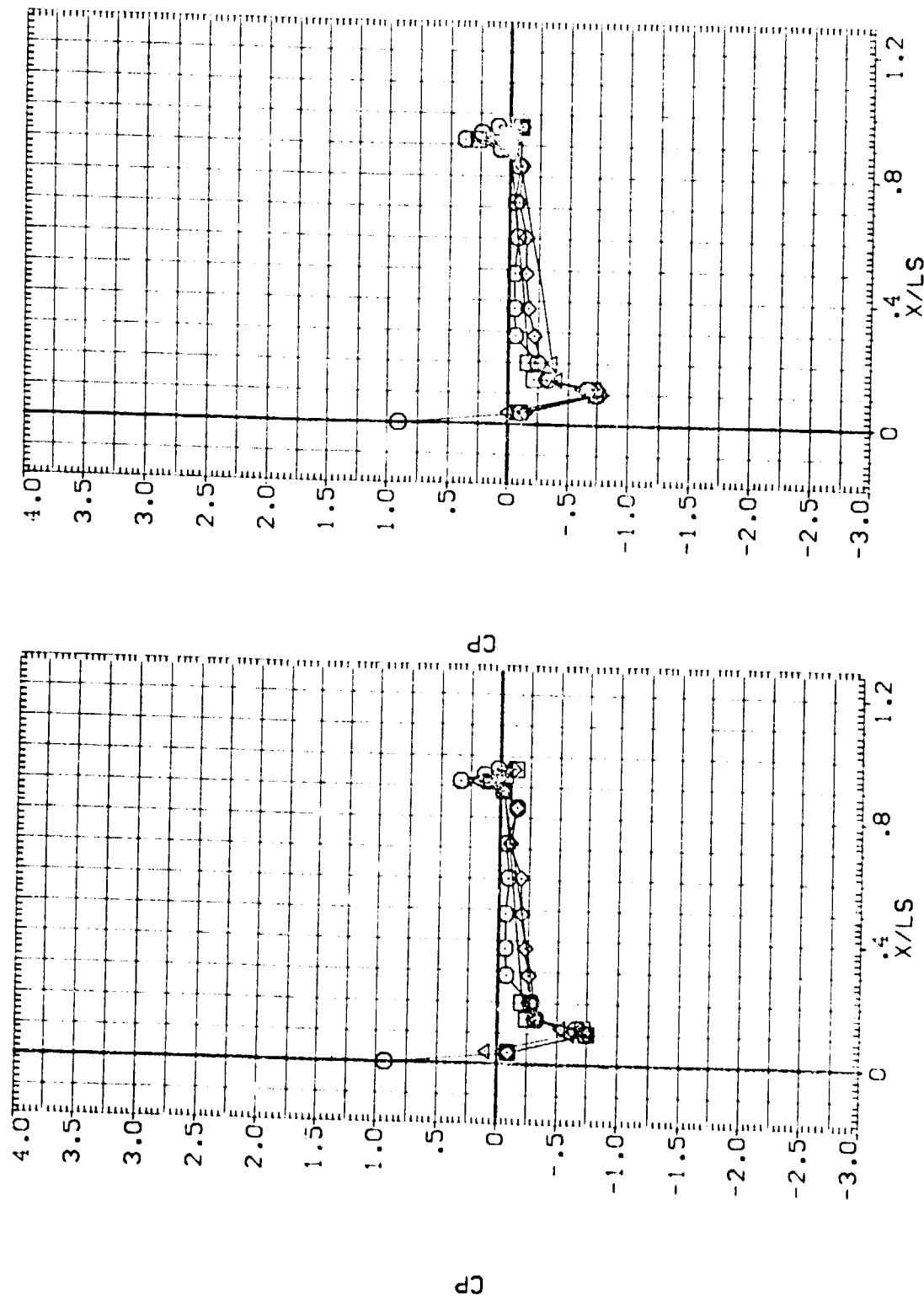
SYMBOL
 ○
 □
 ◇
 △

PHI .000
 45.000
 90.000
 135.000

BETAT 4.080
 6.150

ALPHAT -8.320

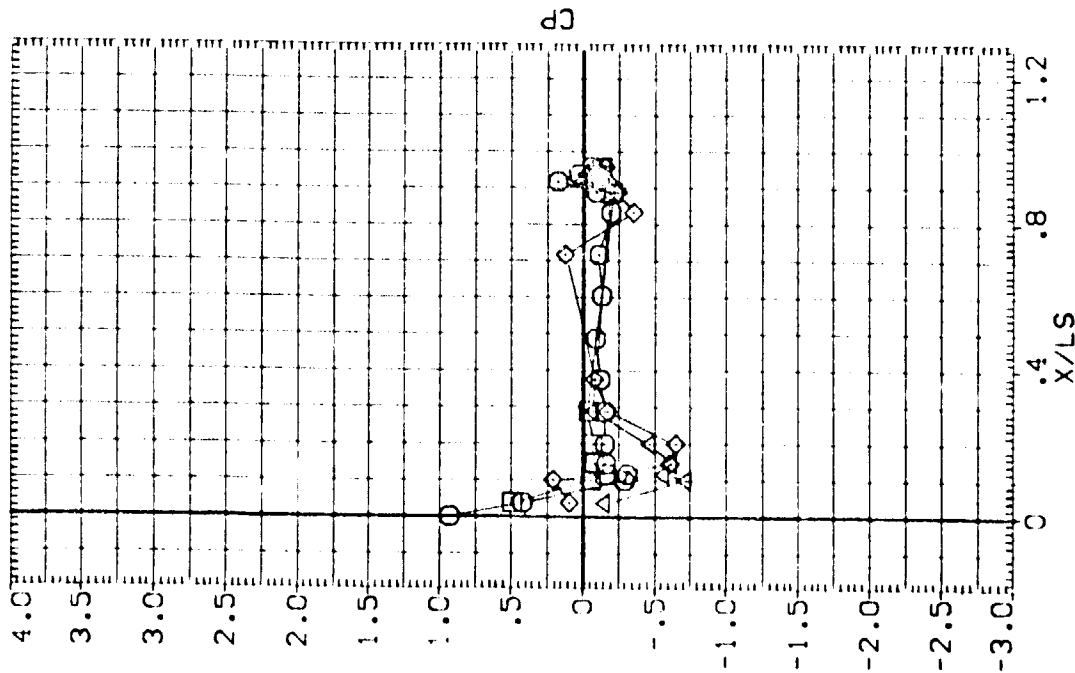
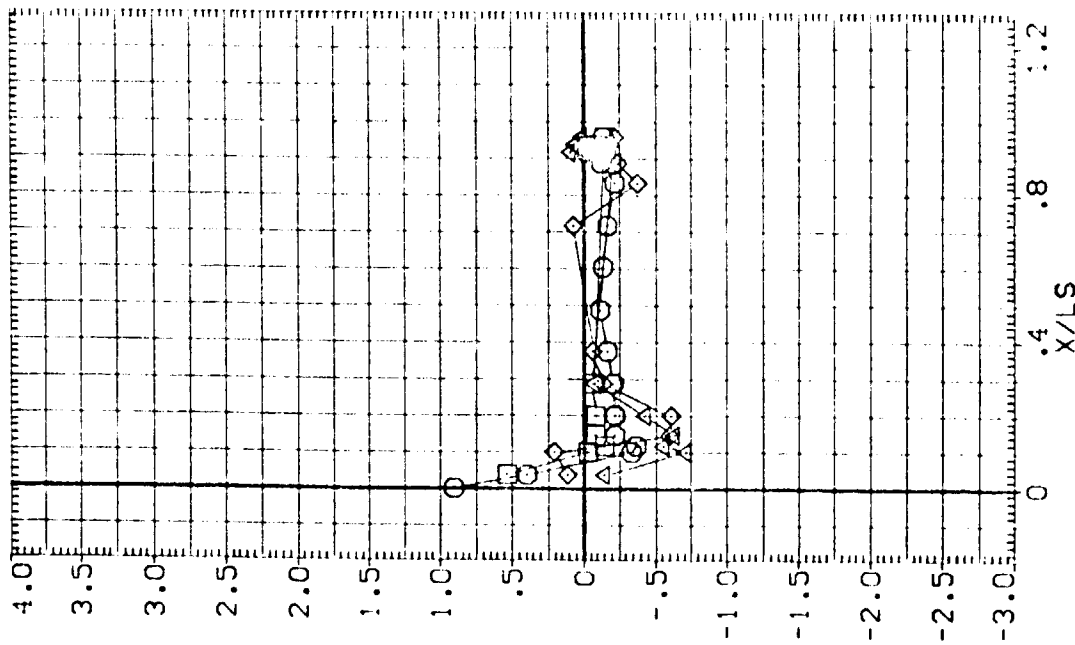
PARAMETRIC VALUES
 MACH .500
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

PARAMETRIC VALUE
 MACH .600 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL P-11 BETAT ALPHAT
 180.000 4.080 -8.320
 225.000 8.150
 270.000
 315.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S34)

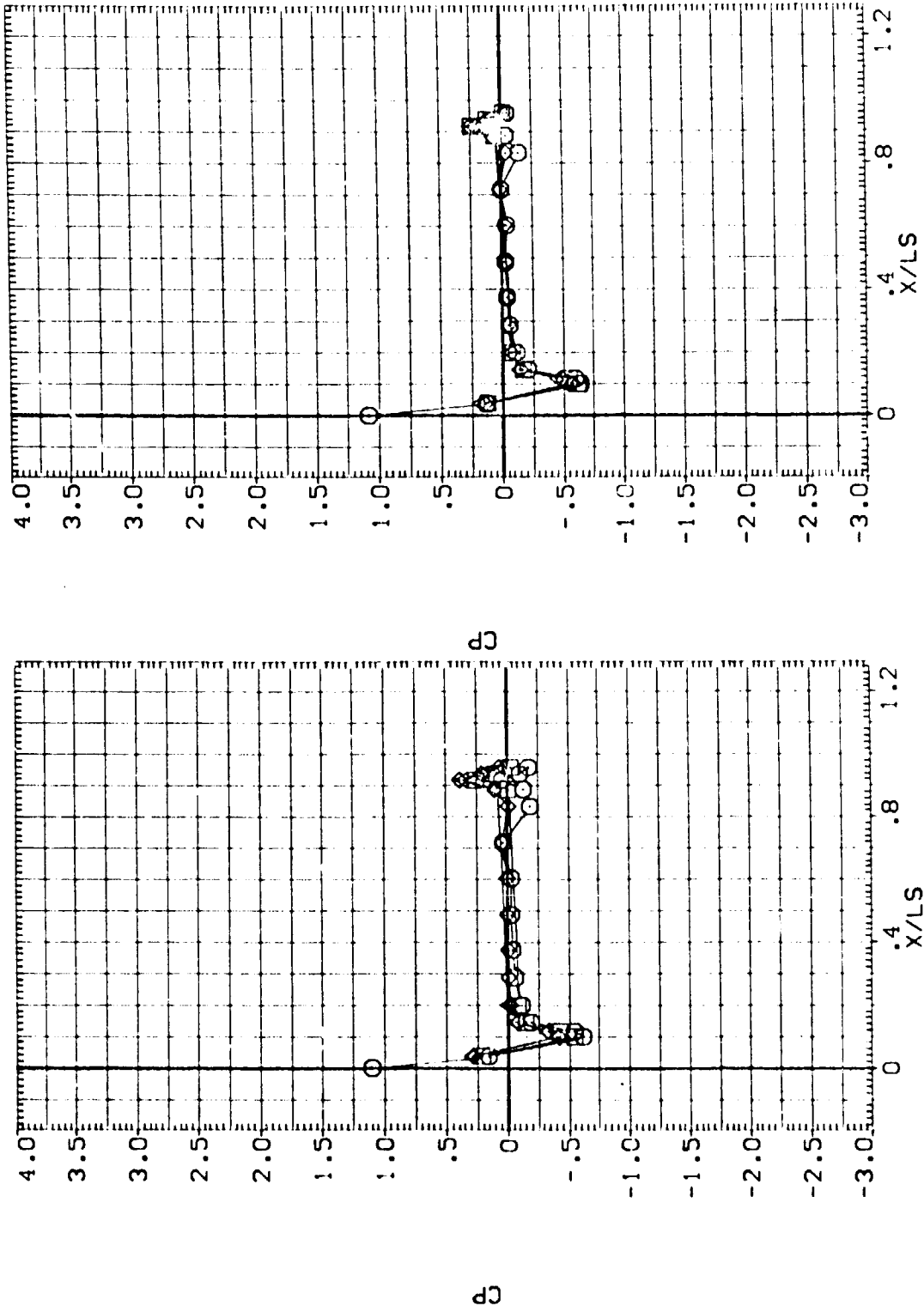
SYMBOL
 ○ □ ◇ △

PHI .000
 45.000
 90.000
 135.000

BETAT -8.150
 .000

ALPHAT -.490

PARAMETRIC VALUES
 MACH .600
 RUDDER .000
 ELEVON .000
 SPODBK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S34)

SYMBOL

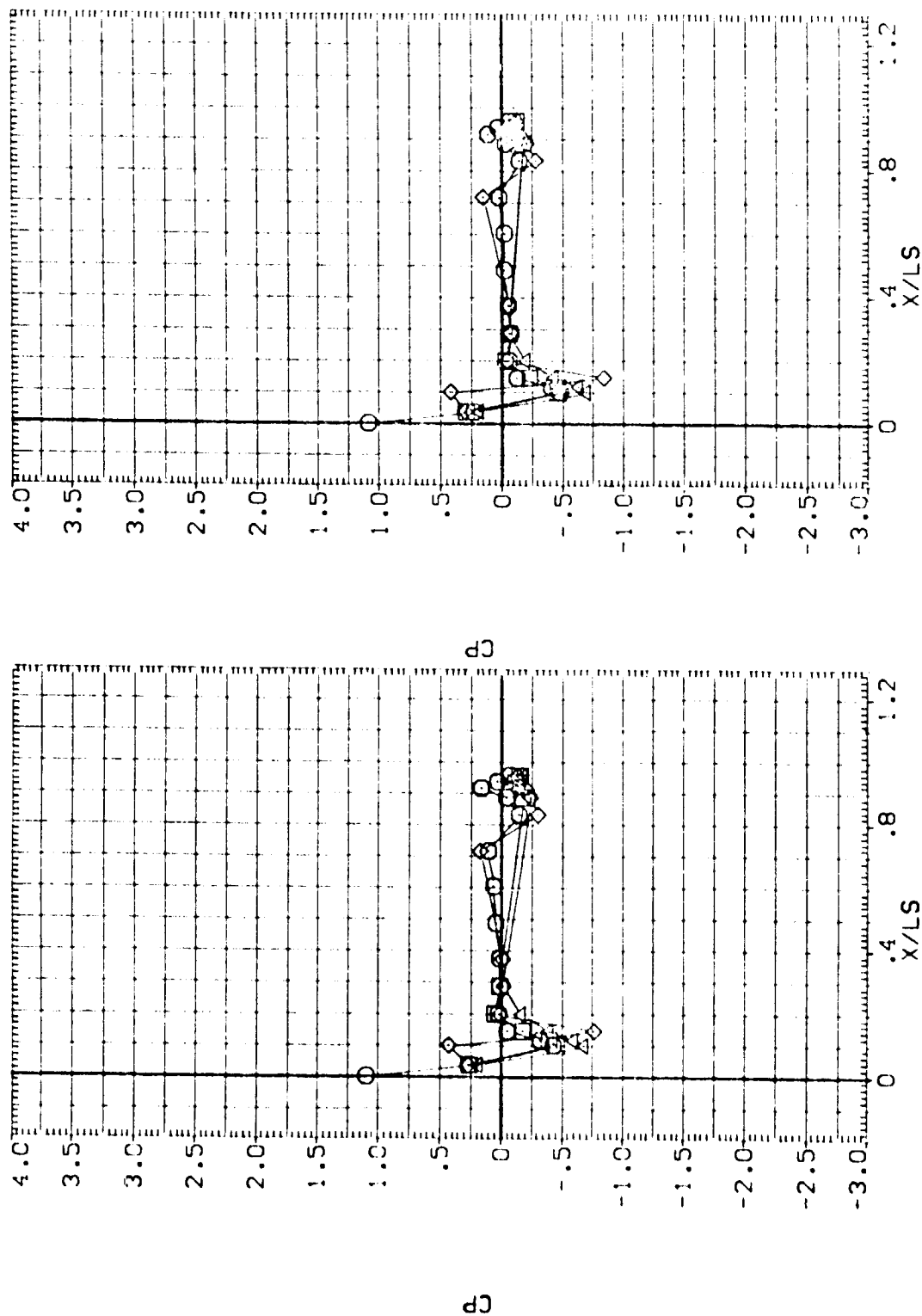
PHI
180.000
225.000
270.000
315.000

BETAT
-8.150
.000

ALPHAT
-.490

MACH
RUDDER

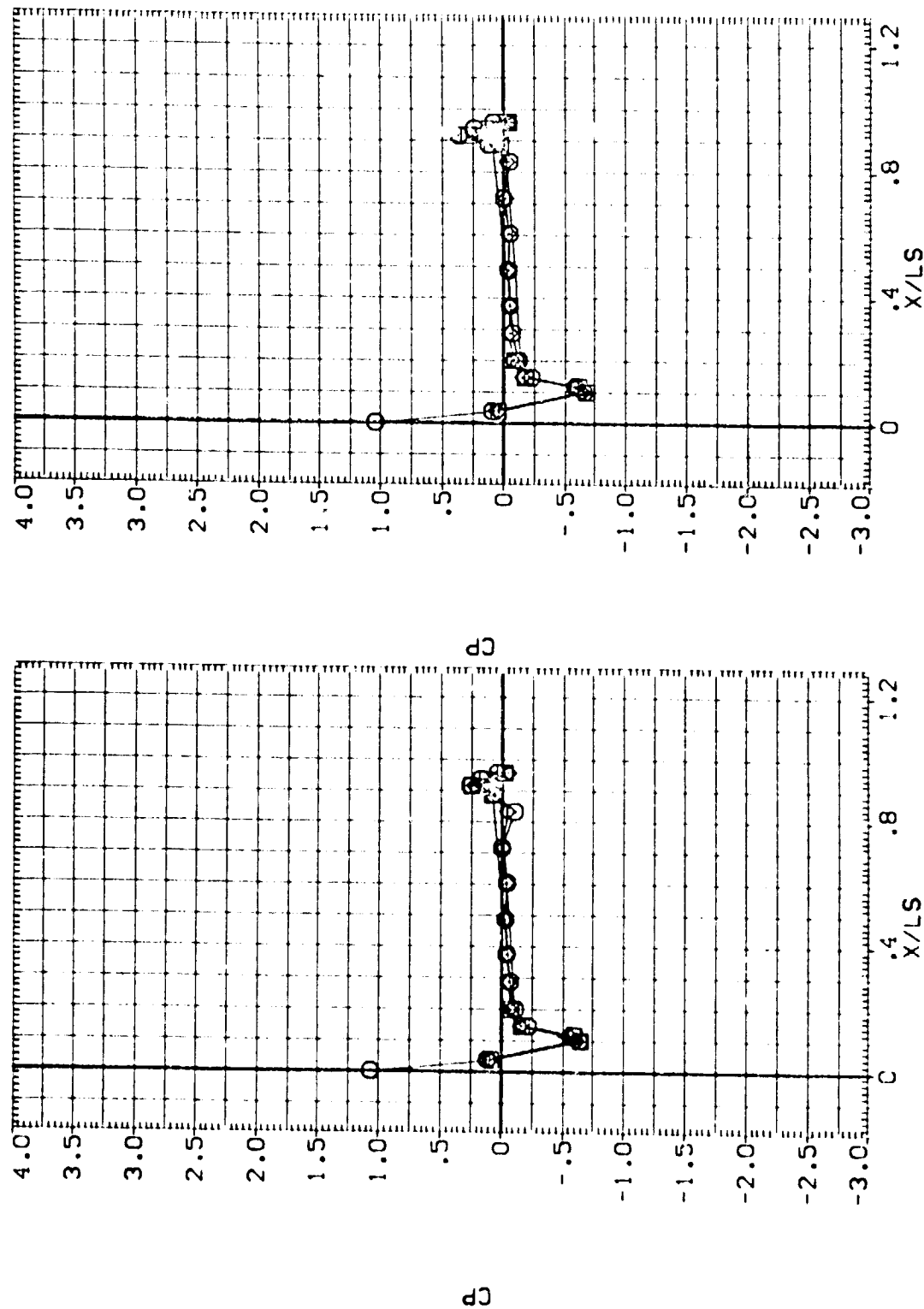
PARAMETRIC VALUES
.600
.000
ELEVON
SPDRK
.000
.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S34)

SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
				MACH	.600	ELEVON
○	.000	4.090	-.470	RUDER	.000	SPDBRK
◇	45.000	8.150				
△	90.000					
	135.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 SRM BOOSTER (RB1S34)

SYMBOL

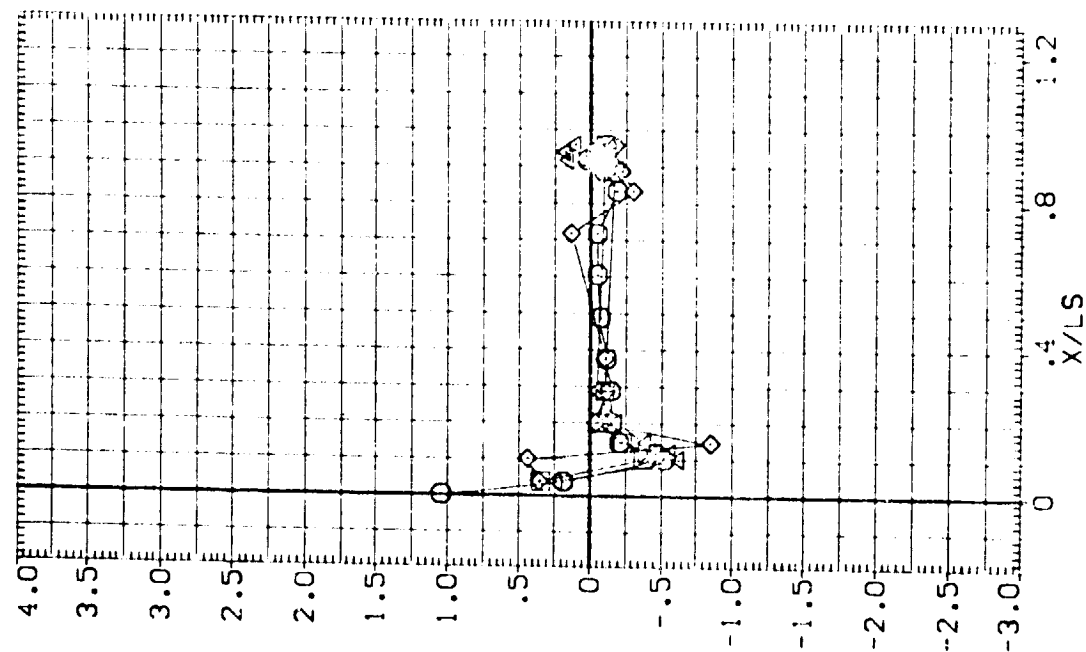
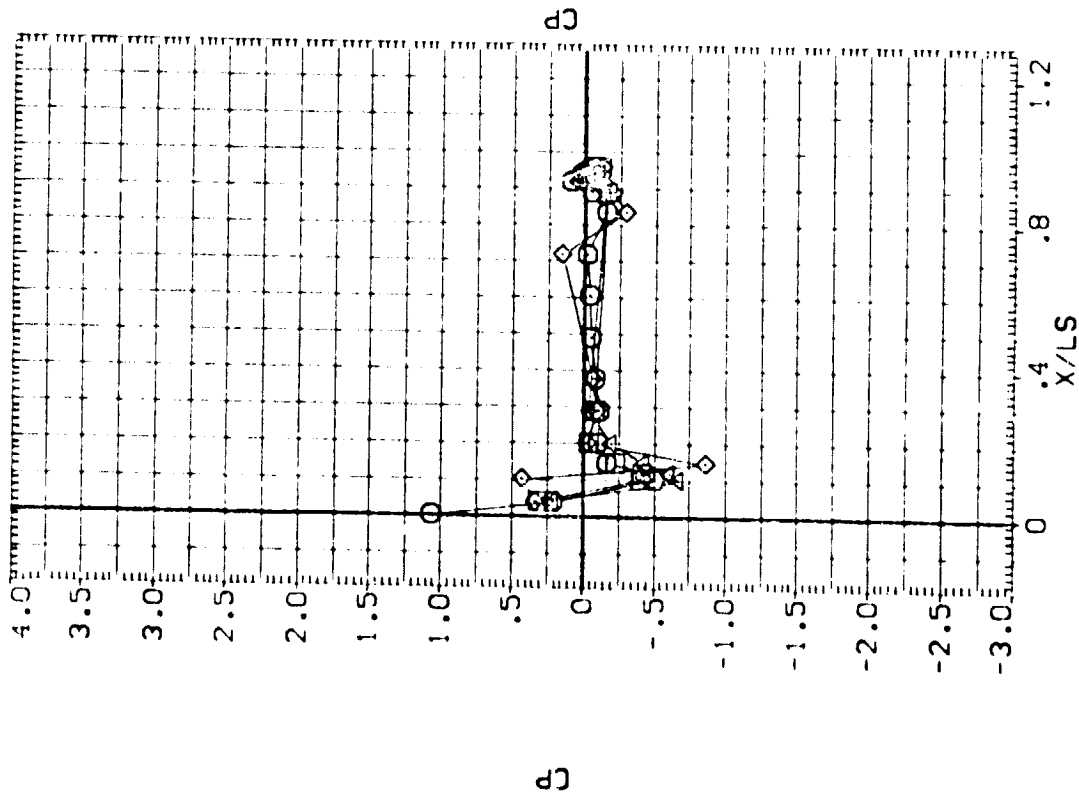
PHI
180.000
225.000
270.000
315.000

BETAT
4.090
8.150

ALPHAT
-.470

PARAMETRIC VALUES

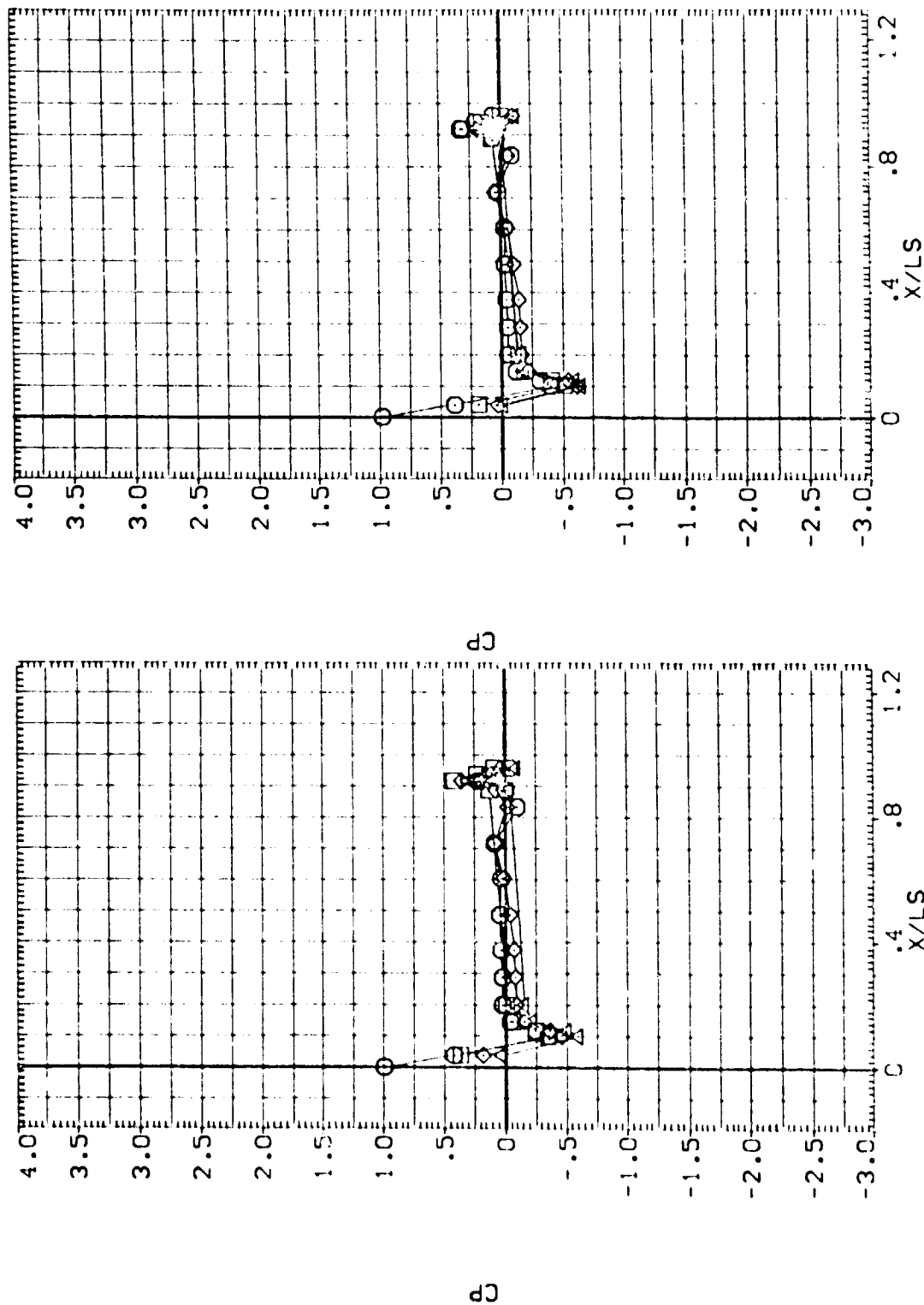
MACH .600 ELEVON .000
RUDDER .000 SPEEDBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 SRM BOOSTER (RB1S34)

SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
○	.000	-8.150	7.940	MACH	.600	ELEVON
◇	45.000	.010		RUDDER	.000	SPOBRK
△	90.000					
	135.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S34)

SYMBOL

PMI

BETAT

ALPHAT

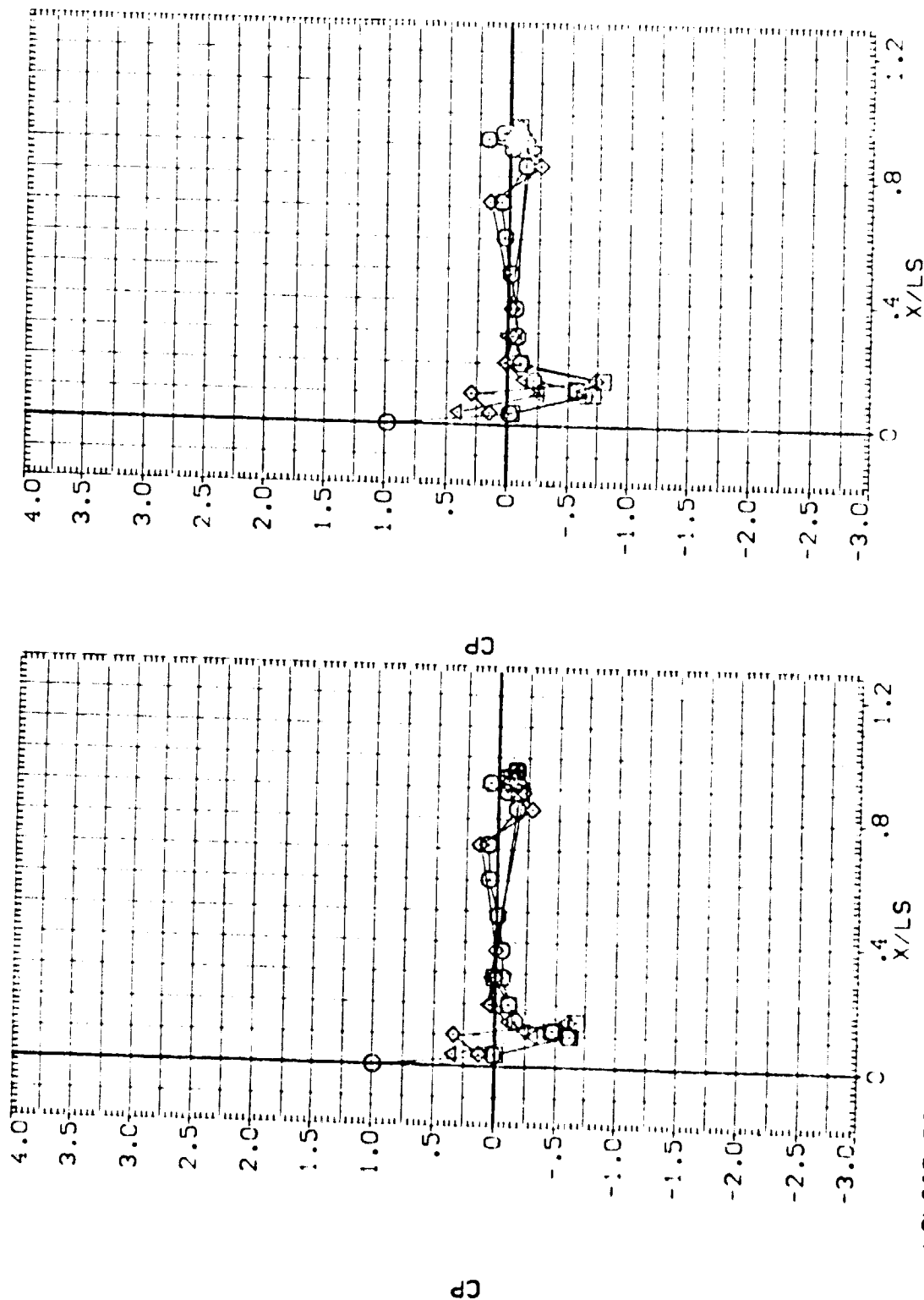
180.000
225.000
270.000
315.000

-8.150
.010

7.940

PARAMETRIC VALUES

MACH .600 ELEVCH .000
RUDDER .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:-7:16 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S34)

SYMBOL

-
- ◇
- △

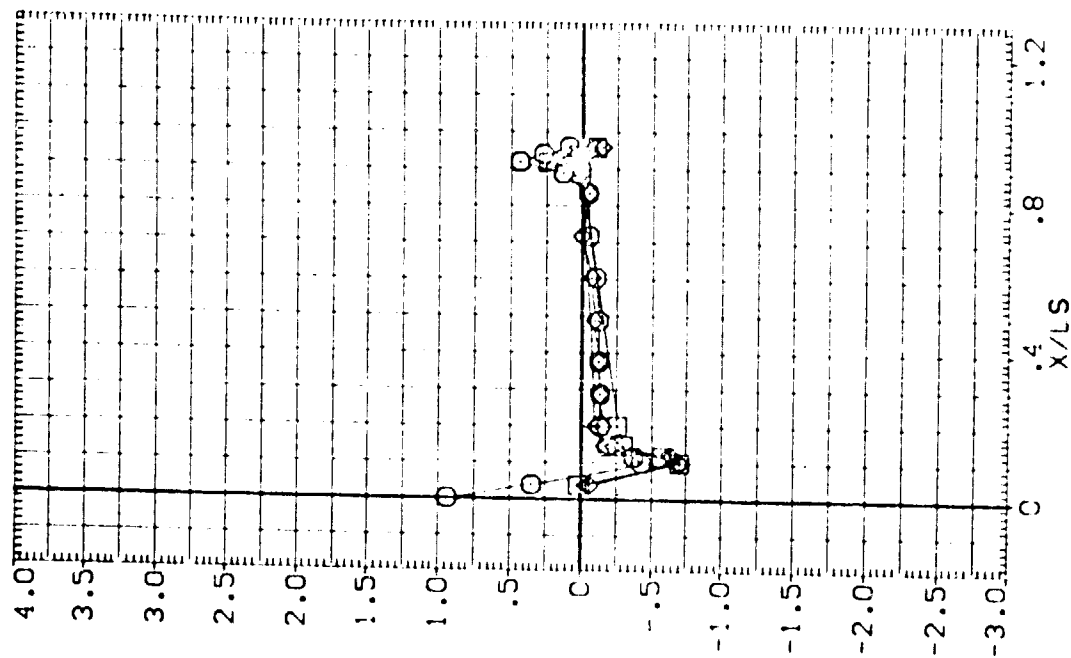
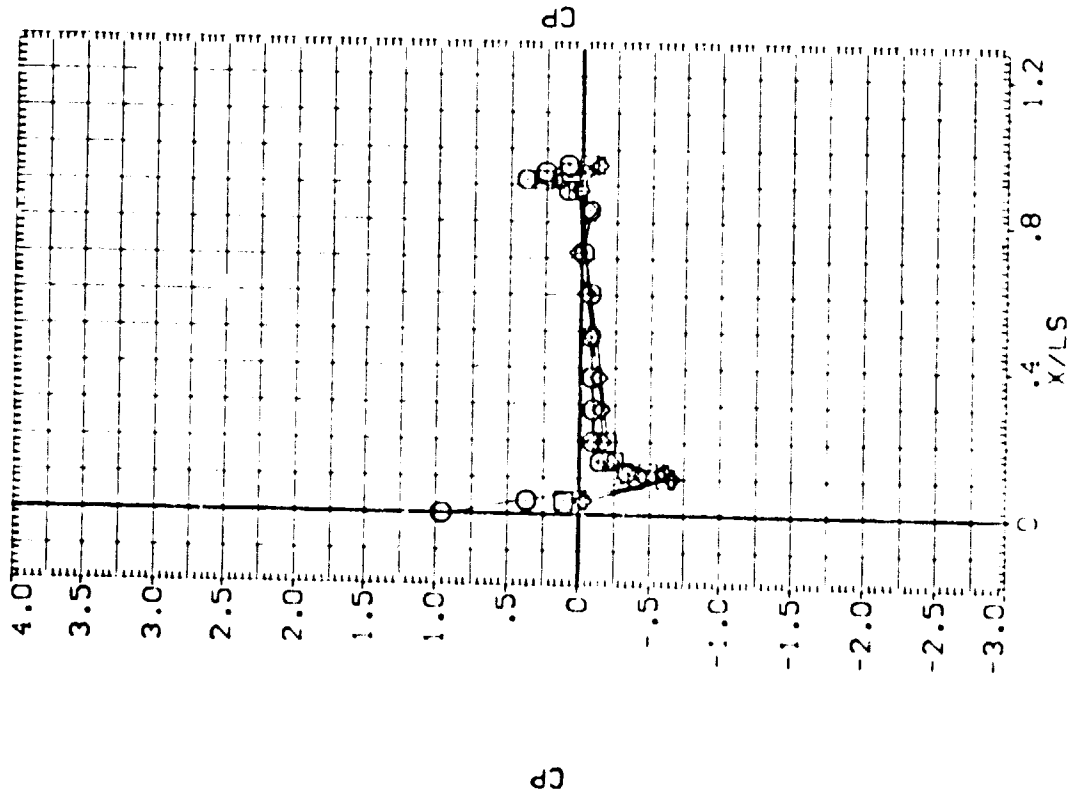
PHI

BETAT ALPHAT
4.120 7.970
8.240

.000
45.000
90.000
135.000

PARAMETRIC VALUES

MACH .600 ELEVON .000
RUDDER .000 SPEEDK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+12+S12N25+AT11 SRM BOOSTER (RB1334)

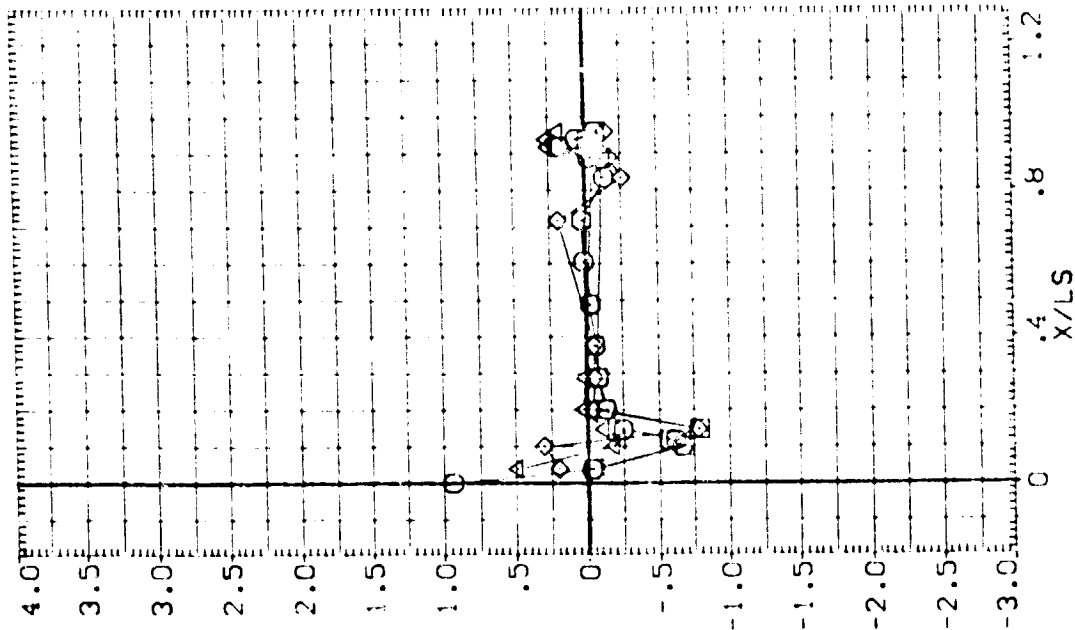
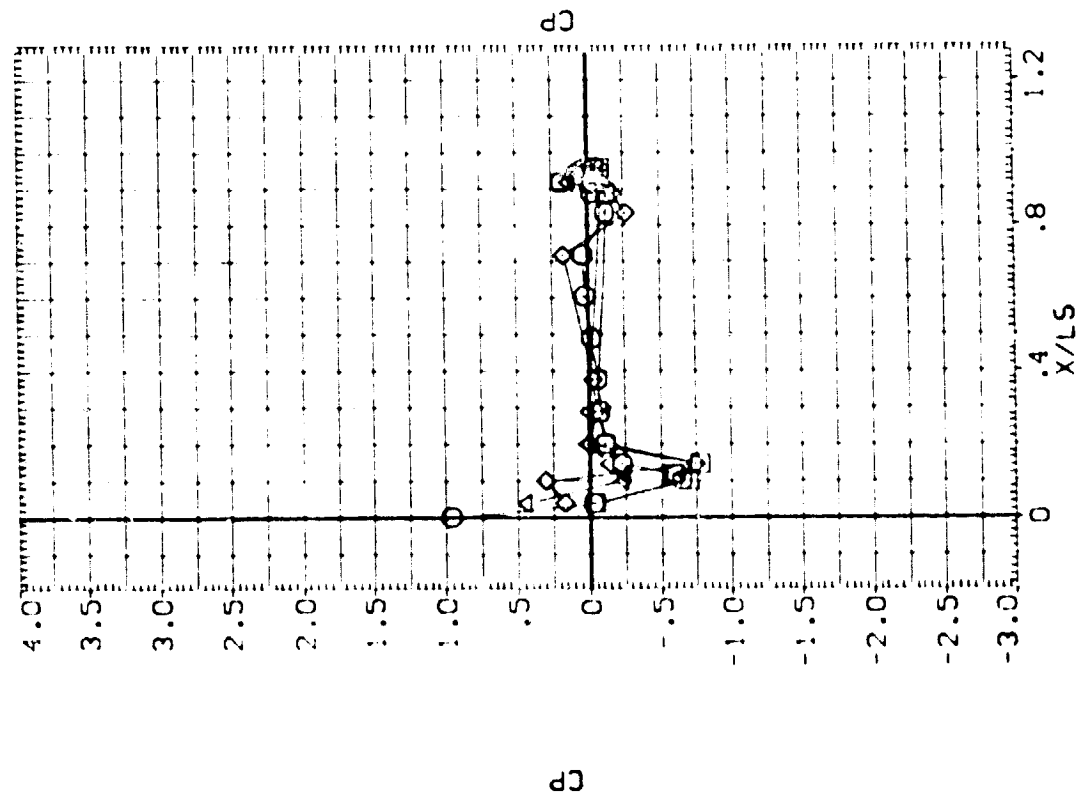
SYMBOL

PMI
180.000
225.000
270.000
315.000

BETAT
4.120
8.240

ALPHAT
7.970

PARAMETRIC VALUES
MAG-
RUDER
.000
ELEVON
SPDBRK
.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:-716 1A:4 01+T12+S12N25+AT11 SRM BOOSTER (RB1S38)

SYMBOL

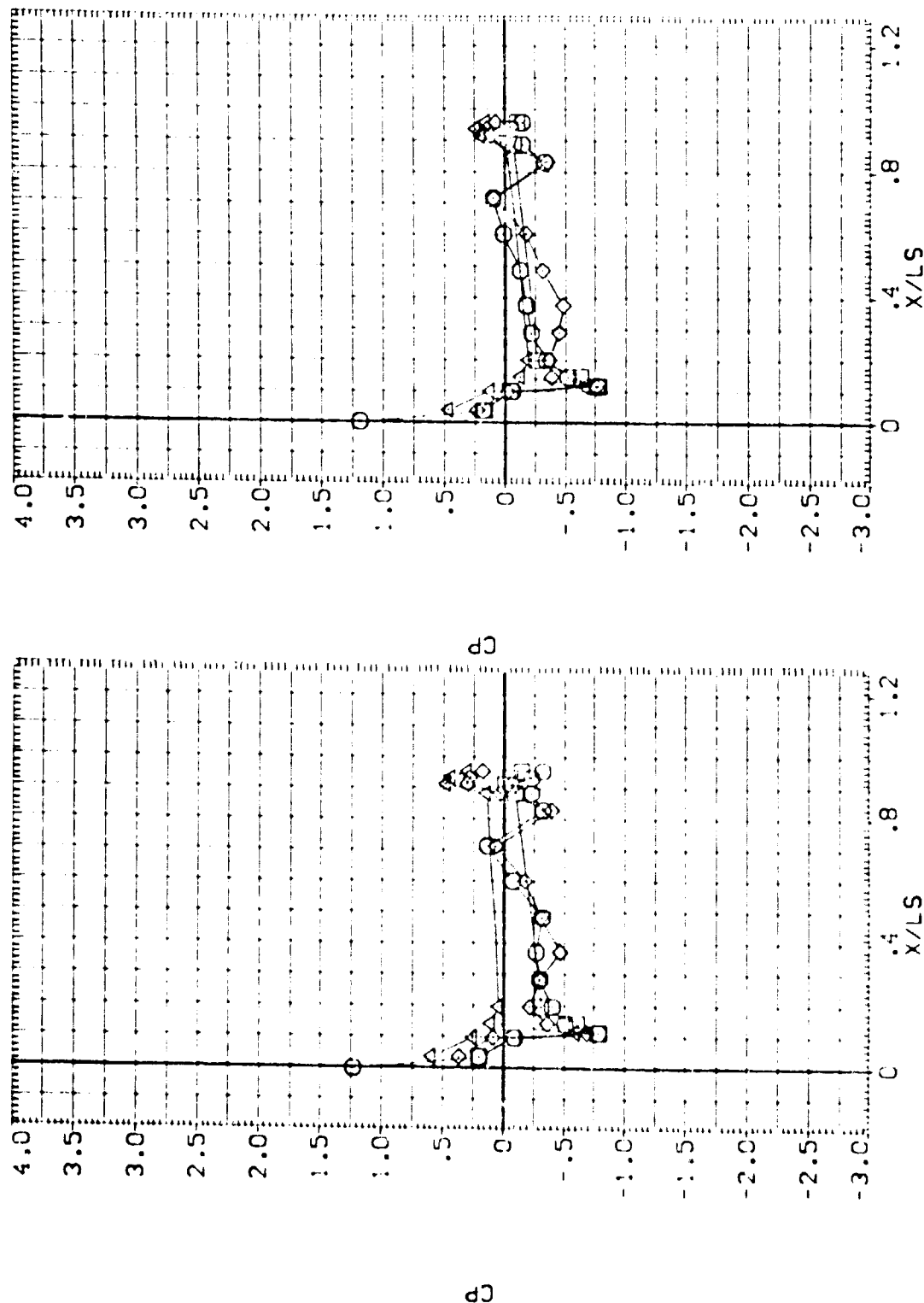
O .000
 45.000
 90.000
 135.000

BETAT
 -8.150
 .000

ALPHAT
-6.600

MACH
 RUDDER

PARAMETRIC VALUES
 1.050
 .000
 ELEVON
 SPDRY
 .000
 .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RBIS38)

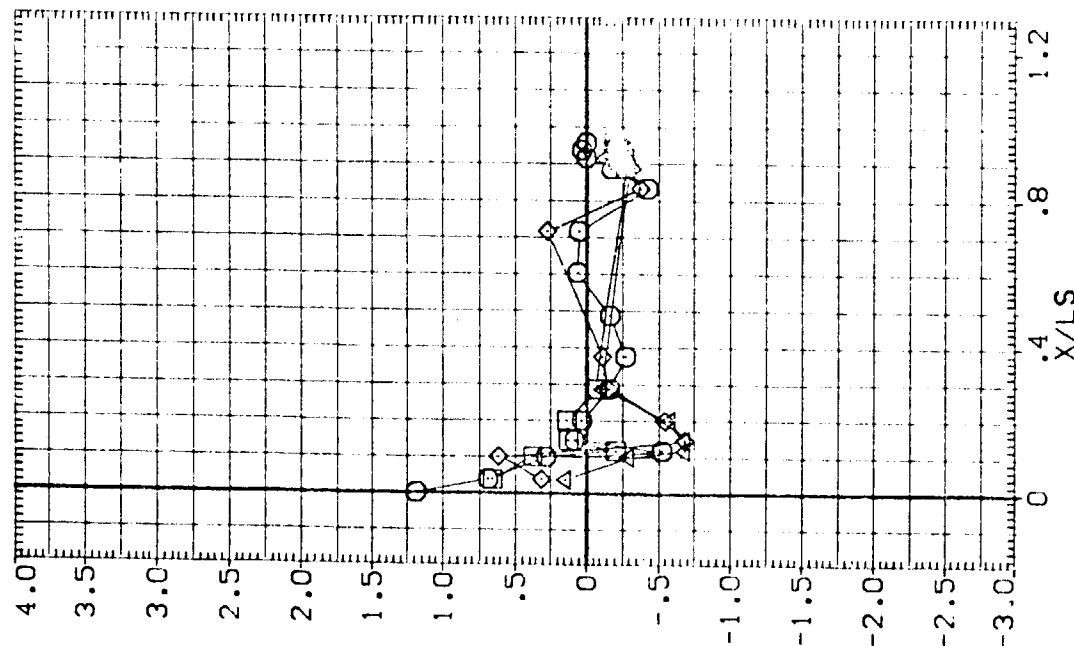
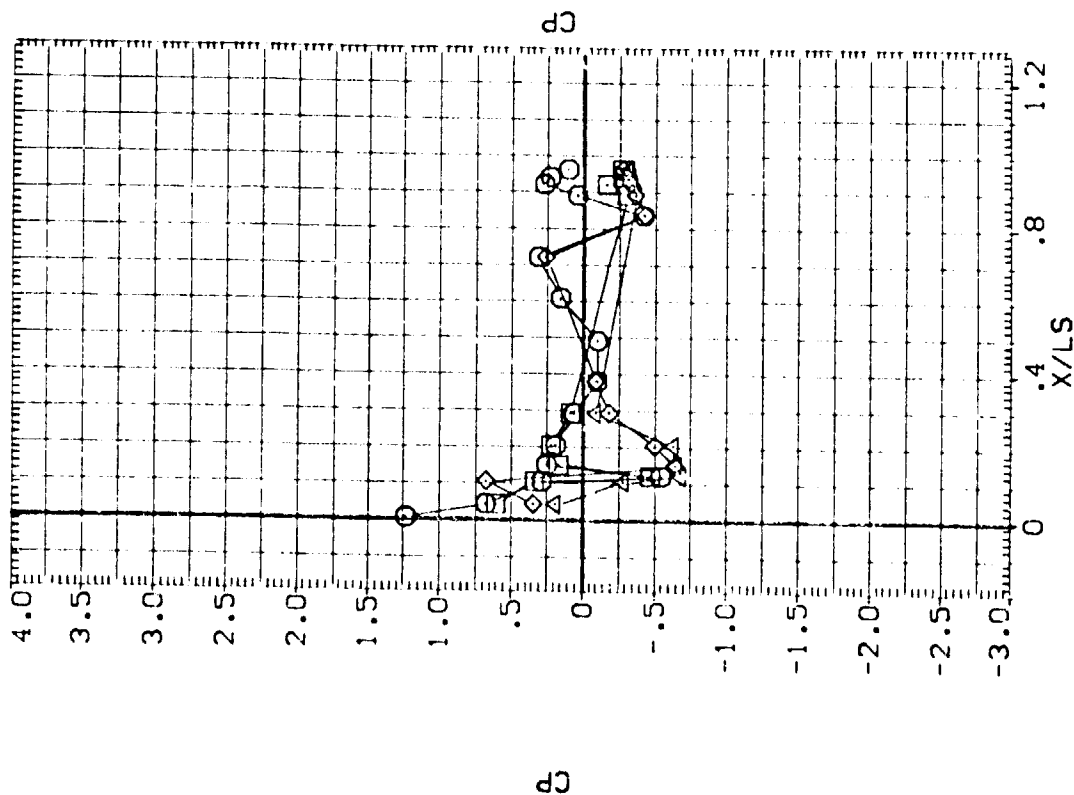
SYMBOL

PHI 180.000
225.000
270.000
315.000

BETAT -8.150
.000

ALPHAT -8.600

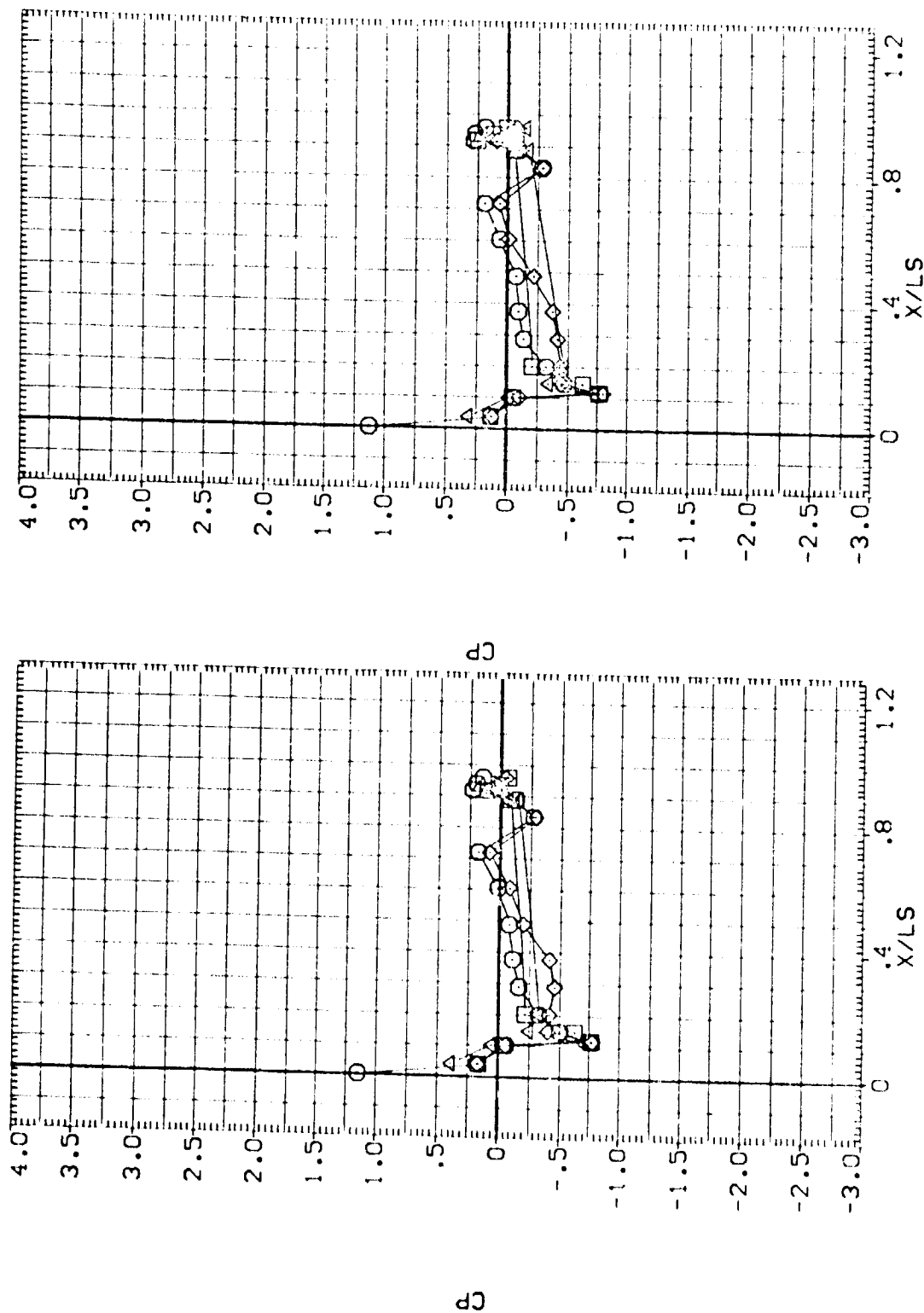
MACH 1.050
RUDDER .000
ELEVON .000
SPDRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S38)

SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
				MACH	ELEVON	SPDRK
○	.000	4.120	-8.570	1.050	.000	.000
□	45.000	8.200		.000	.000	.000
◇	90.000					
△	135.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:1-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S38)

SYMBOL

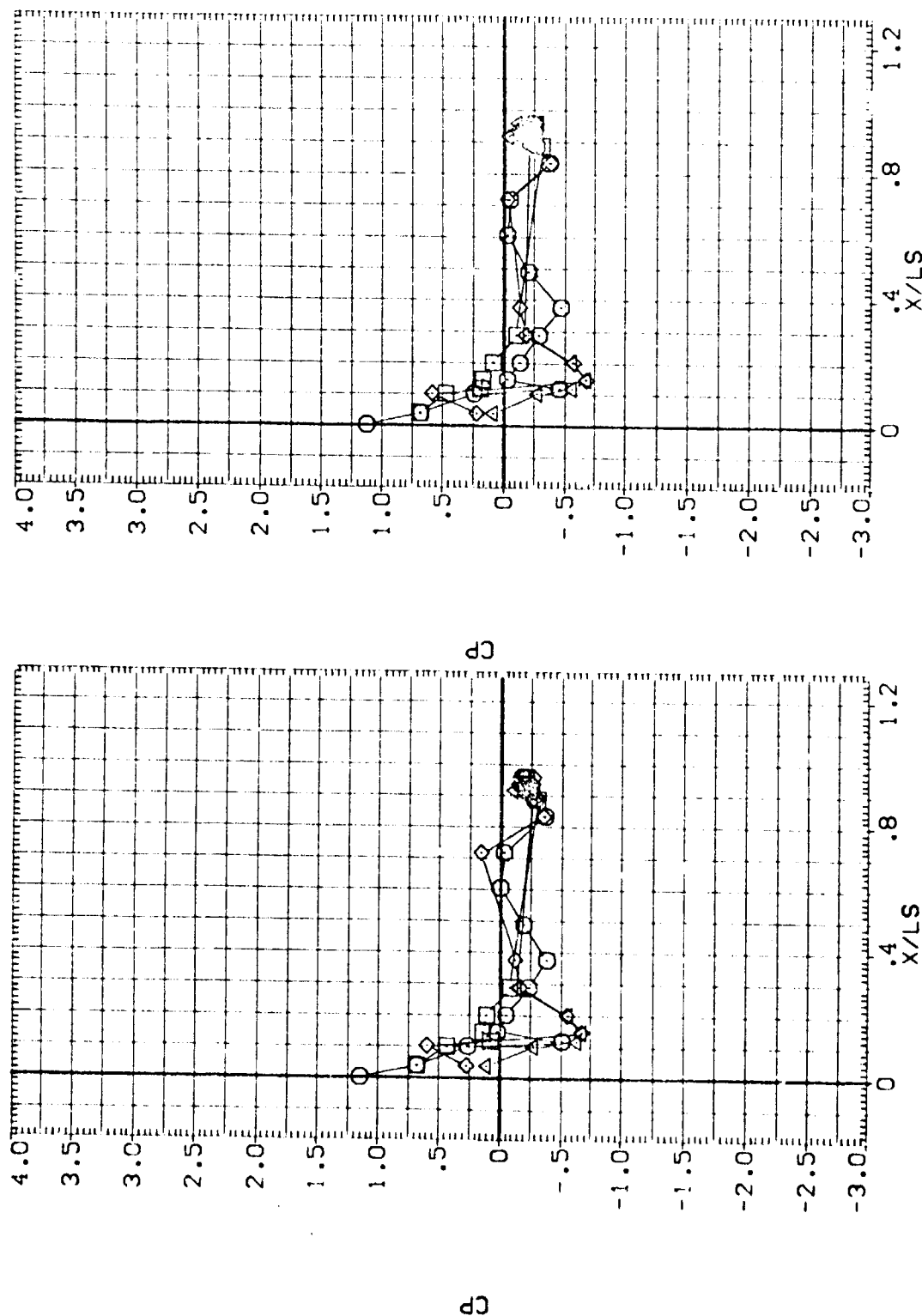
PHI
180.000
225.000
270.000
315.000

BETAT
4.120
8.200

ALPHAT
-8.570

PARAMETRIC VALUES

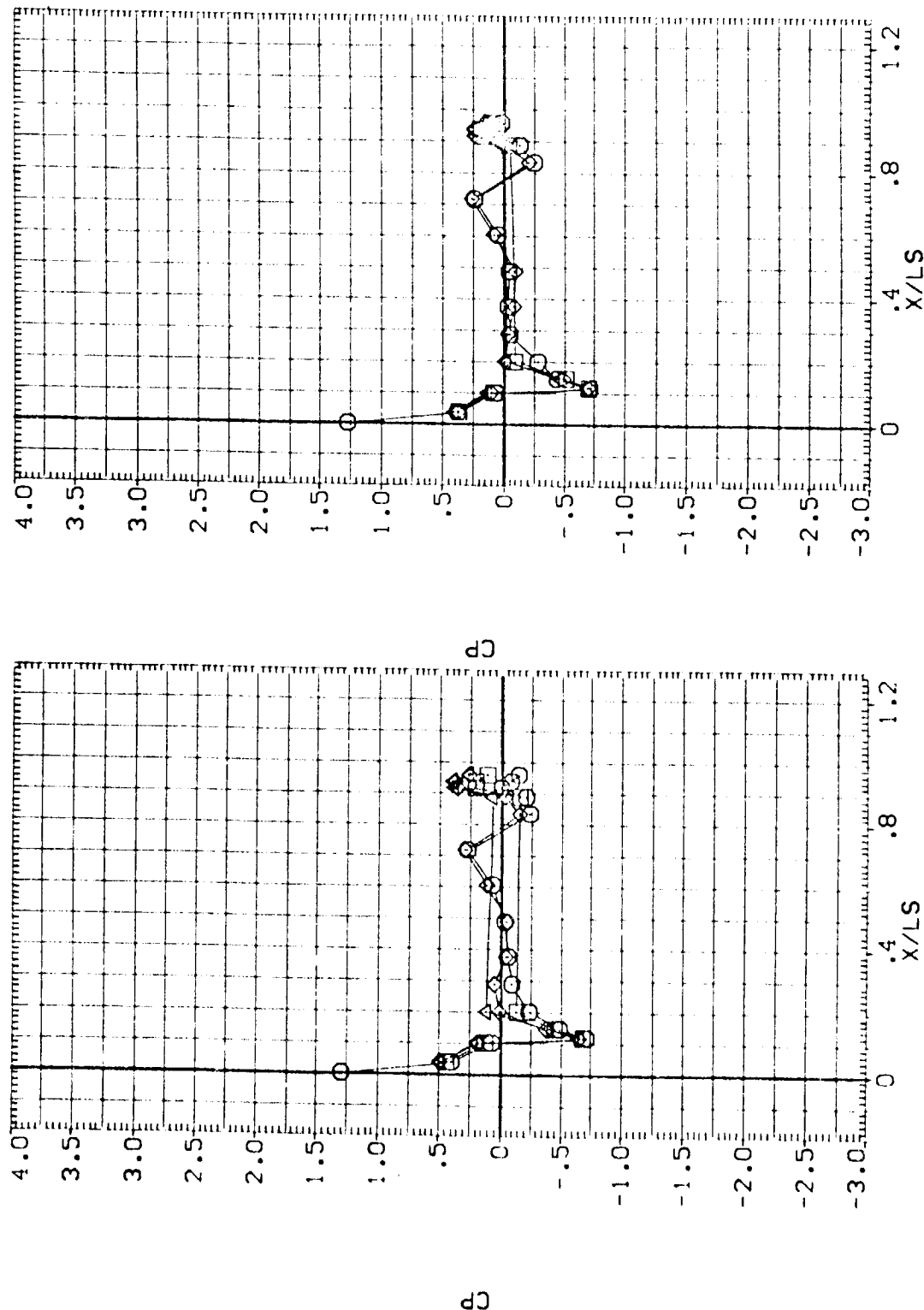
MACH 1.050 ELEVON .000
RUDDER .000 SPDRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S38)

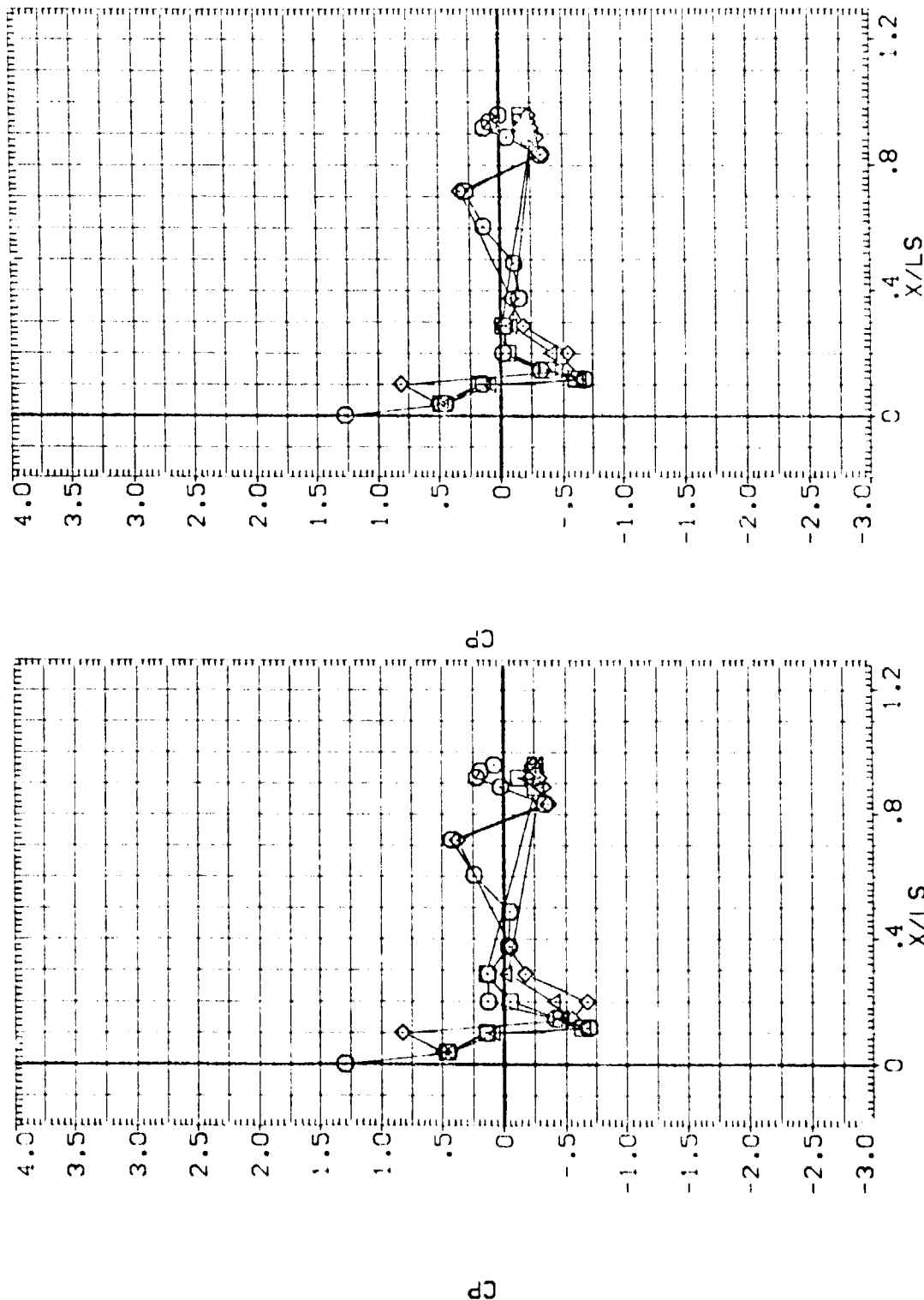
SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES	
	0.000	-8.170	-.540	MACH	1.050
	45.000	.000		ELEVON	.000
	90.000			RUDDER	.000
	135.000			SPOBRK	.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1538)

SYMBOL	PHI	BETAT	ALPHAT	MACH	PARAMETRIC VALUES
○	180.000	-8.170	-540	1.050	ELEVON .000
◇	225.000	.000		.000	SPDRK .000
△	270.000				
	315.000				



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+I12+S12N25+AT11 SRM BOOSTER (RB1S38)

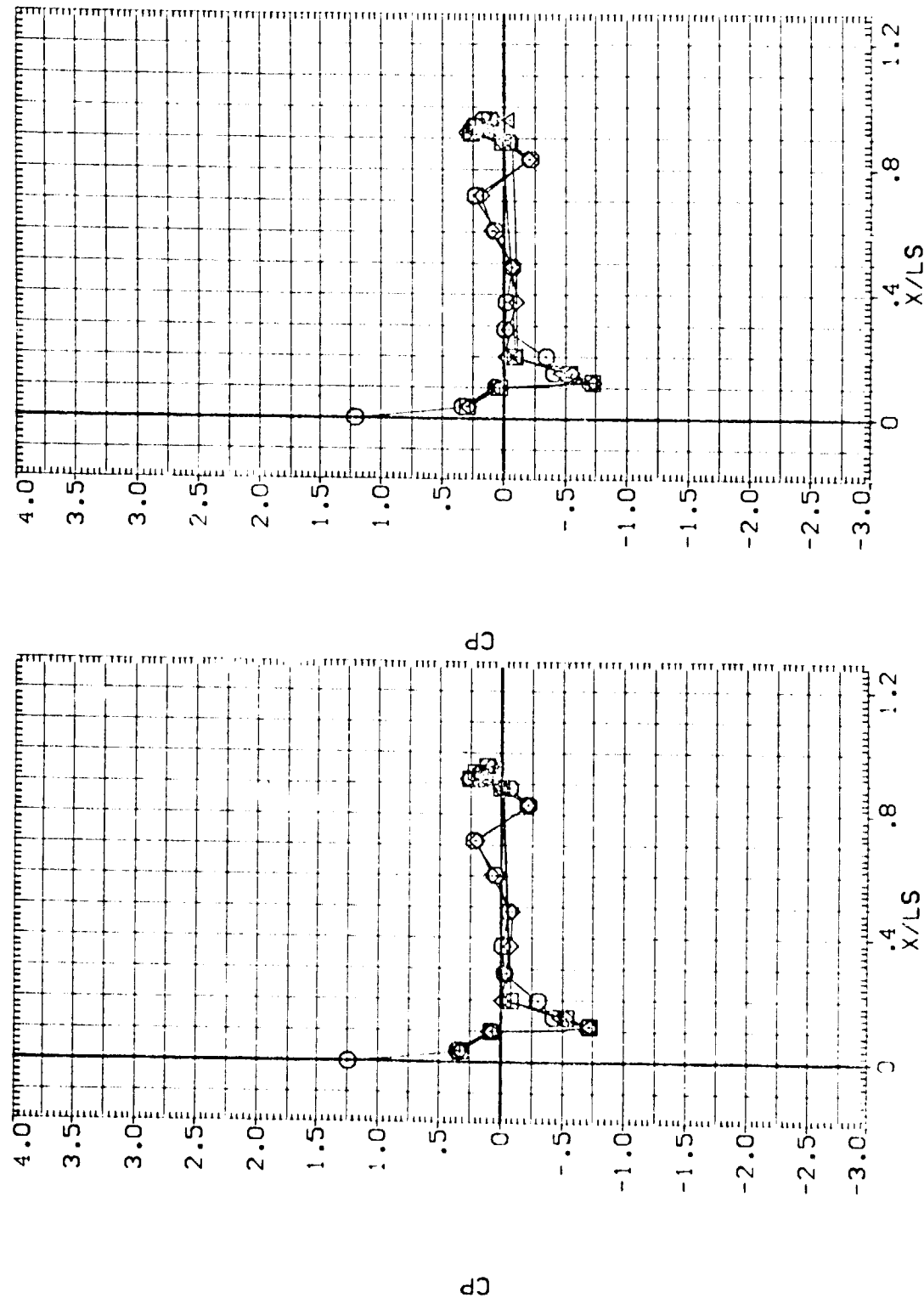
SYMBOL
 ○ □ ◇ △

PHI .000
 45.000
 90.000
 135.000

BETAT 4.100
 8.180

ALPHAT -5.520

PARAMETRIC VALUES
 MACH 1.050
 RUDDER .000
 ELEVON .000
 SPOBRK .000

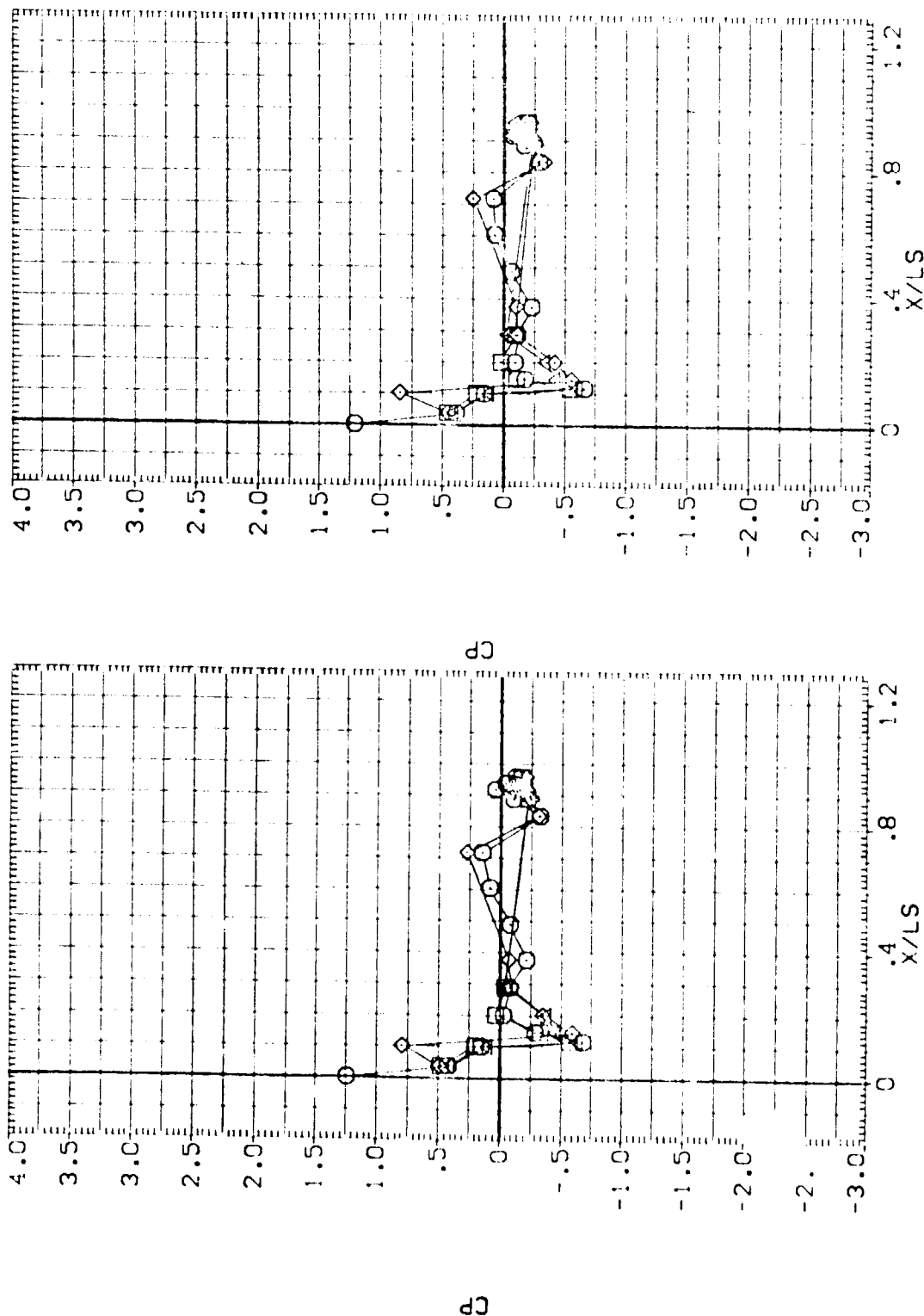


LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA:4 01+T12+S12N25+AT11 SRM BOOSTER (RB1S38)

SYMBOL PHI BETAT ALPHAT
 ○ 180.000 4.100 -5.20
 ◇ 225.000 8.180
 △ 270.000 315.000

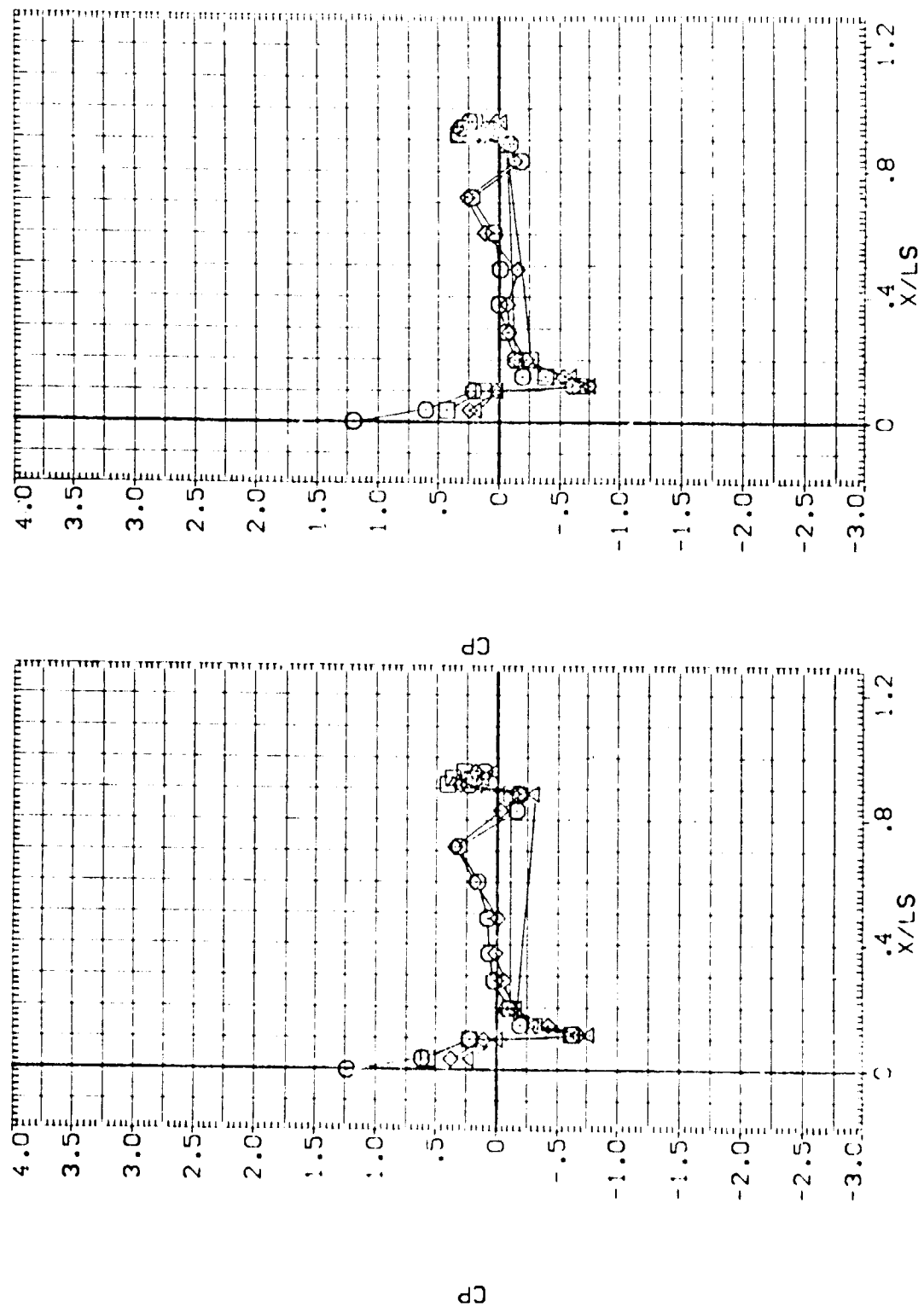
PARAMETRIC VALUES
 MACH 1.050 ELEVCH .000
 RUDDER .000 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S38)

SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
○	.000	-8.160	7.950	MACH	1.050	ELEVON
◇	45.000	.000		RUDDER	.000	SPOON
△	90.000					
	135.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T:2+S12N25+AT11 SRM BOOSTER (RB1S38)

SYMBOL

PHI

BETAT

ALPHAT

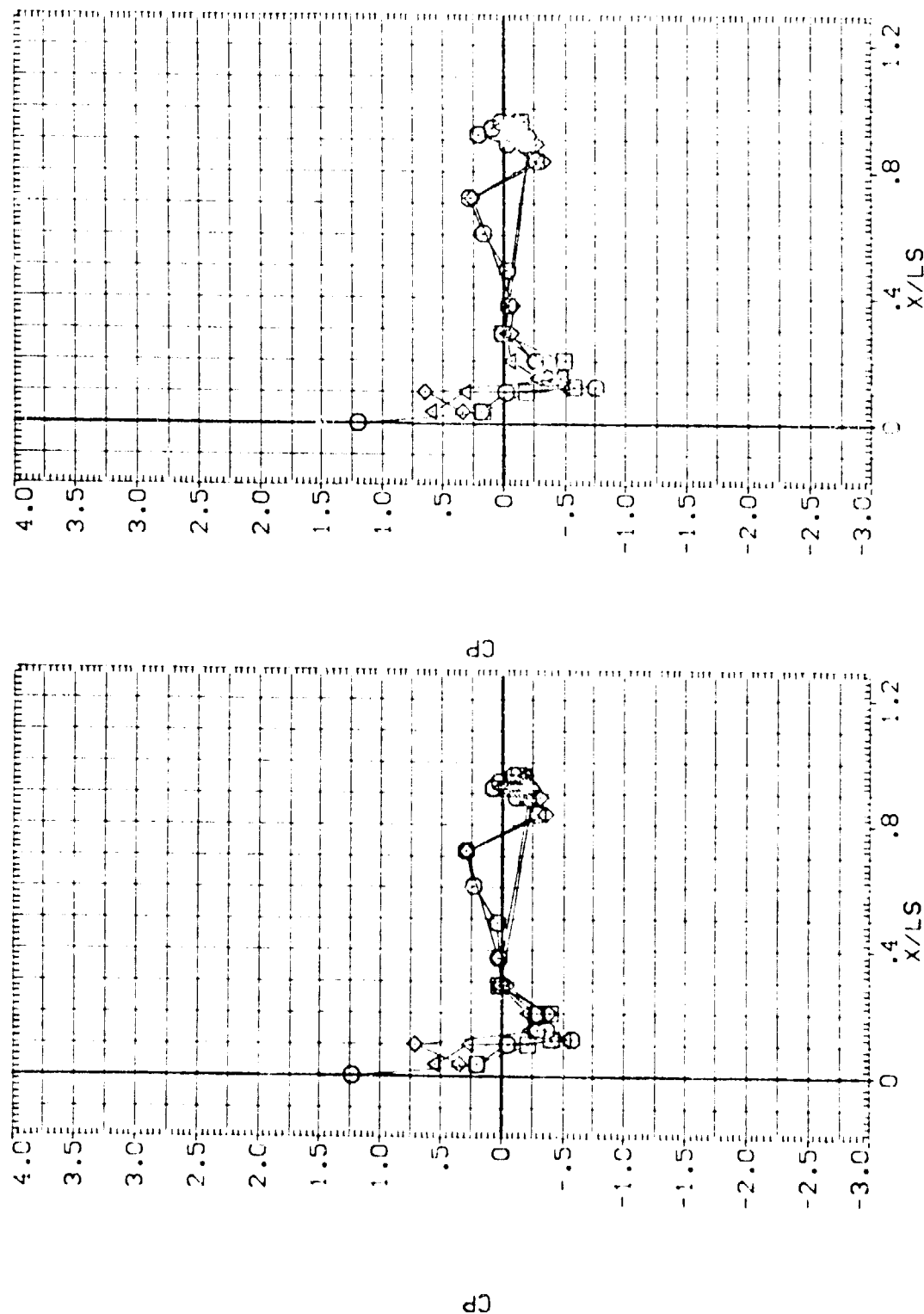
180.000
225.000
270.000
315.000

-8.160
.000

7.950

PARAMETRIC VALUES

MACH 1.050
RUDDER .000
ELEVON .000
SPDRM .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-7:16 [A14 01+112+S12N25+AT11 SRM BOOSTER (RB1S38)

SYMBOL

○
◇
△

PHI .000

45.000

90.000

135.000

BETAT

1.130

8.300

ALPHAT

8.000

PARAMETRIC VALUES

1.050

.000

MACH

.000

.000

ELEVON

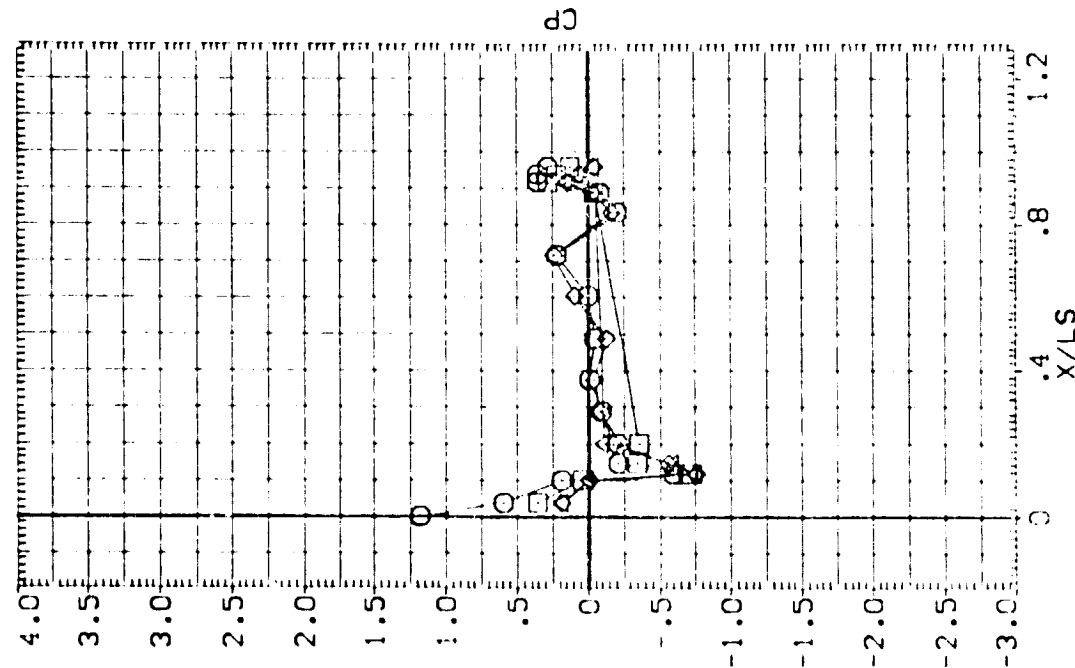
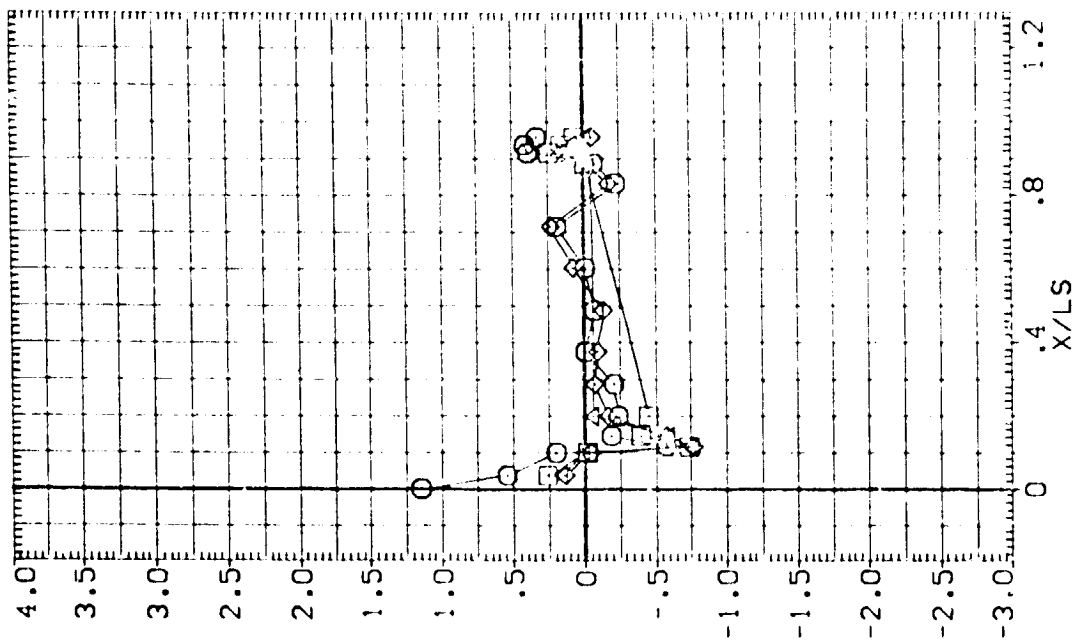
.000

.000

RUDDER

.000

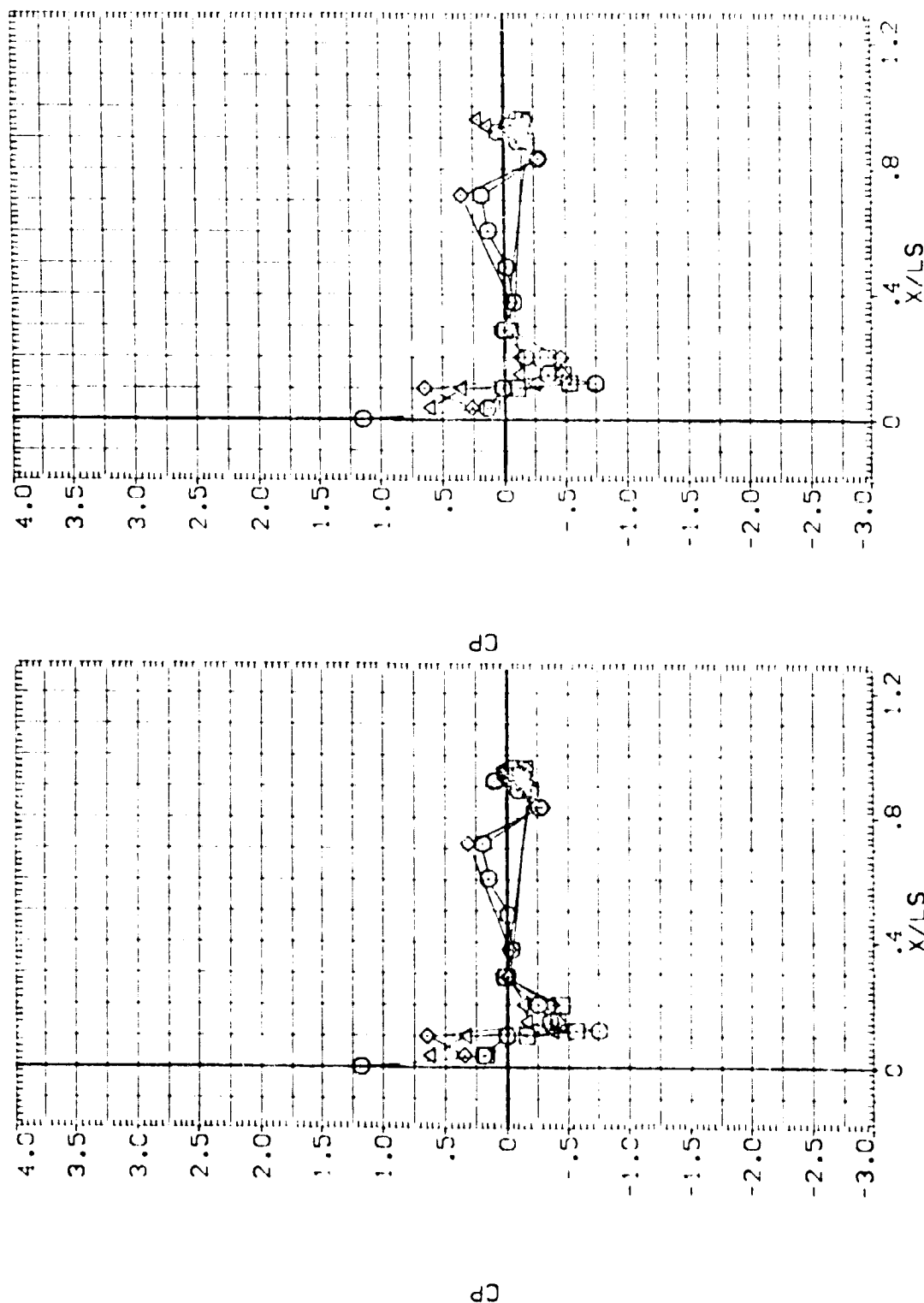
.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB:S38)

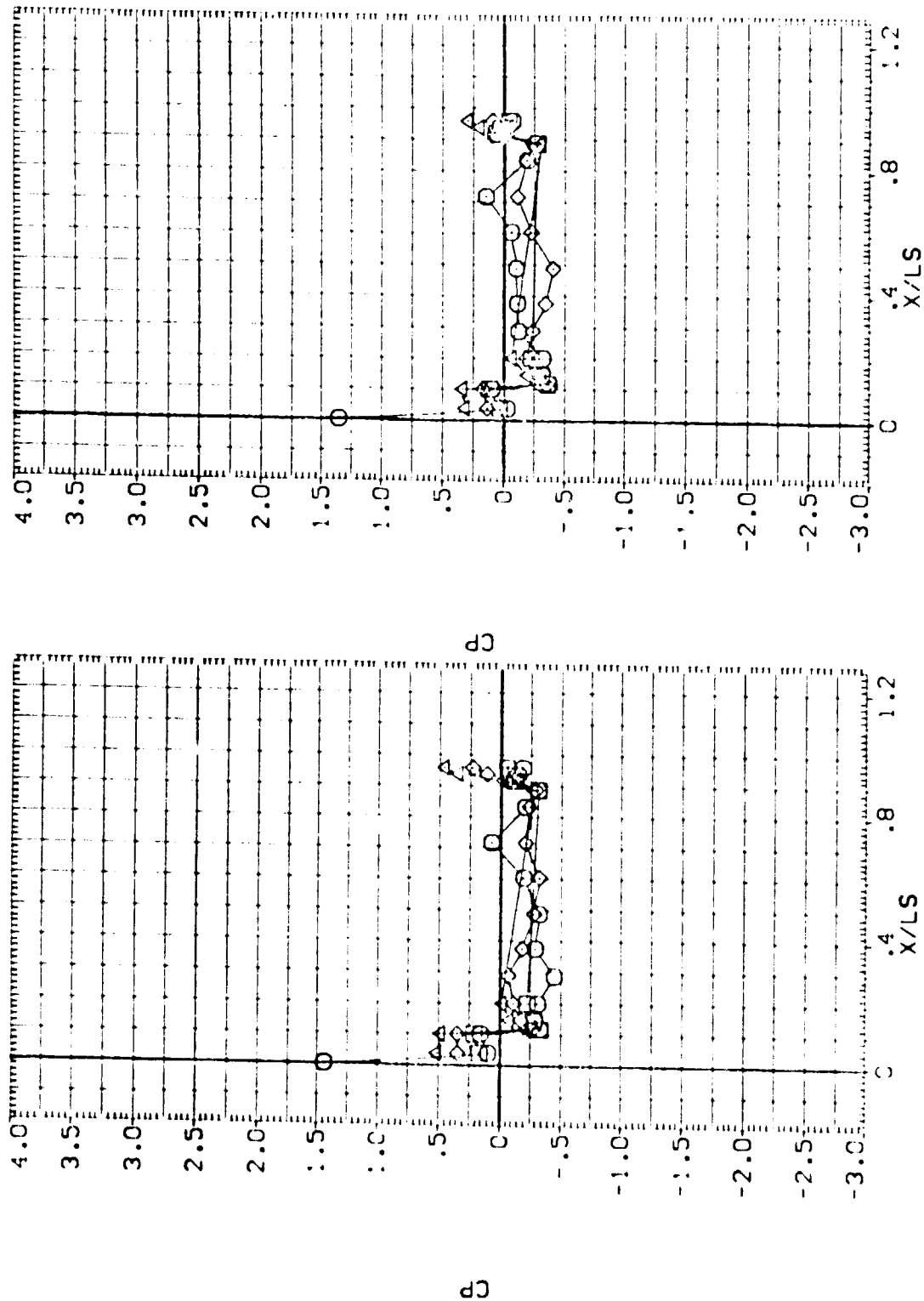
SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES		
				MACH	ELEVON	SPDRK
○	180.000	4.130	8.000	1.050	.000	.000
◇	225.000	8.300		.000	.000	.000
△	270.000					
△	315.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 0:112+S12N25+AT11 SRM BOOSTER (RB1S40)

SYMBOL	PR-I	BETAT	ALPHAT	PARAMETRIC VALUES		
	.000	-8.190	-8.470	MACH	1.400	ELEVON
	45.000	.000		RUDDER	.000	SPDRK
	90.000					.000
	135.000					

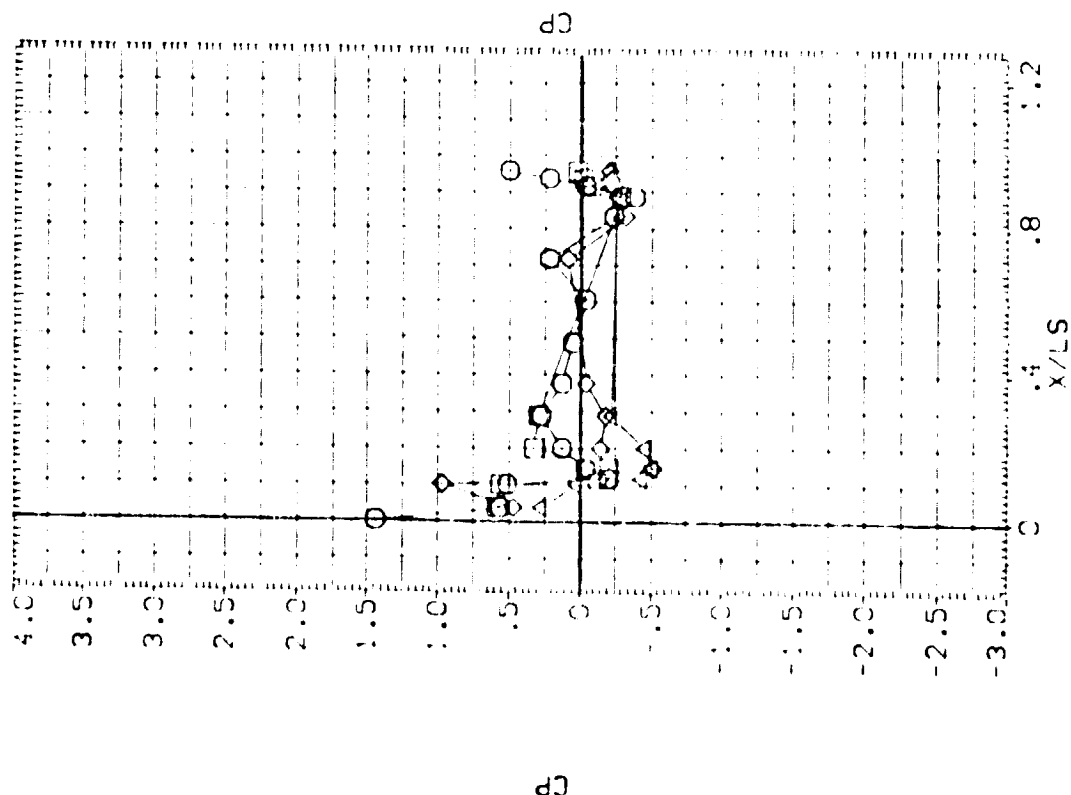
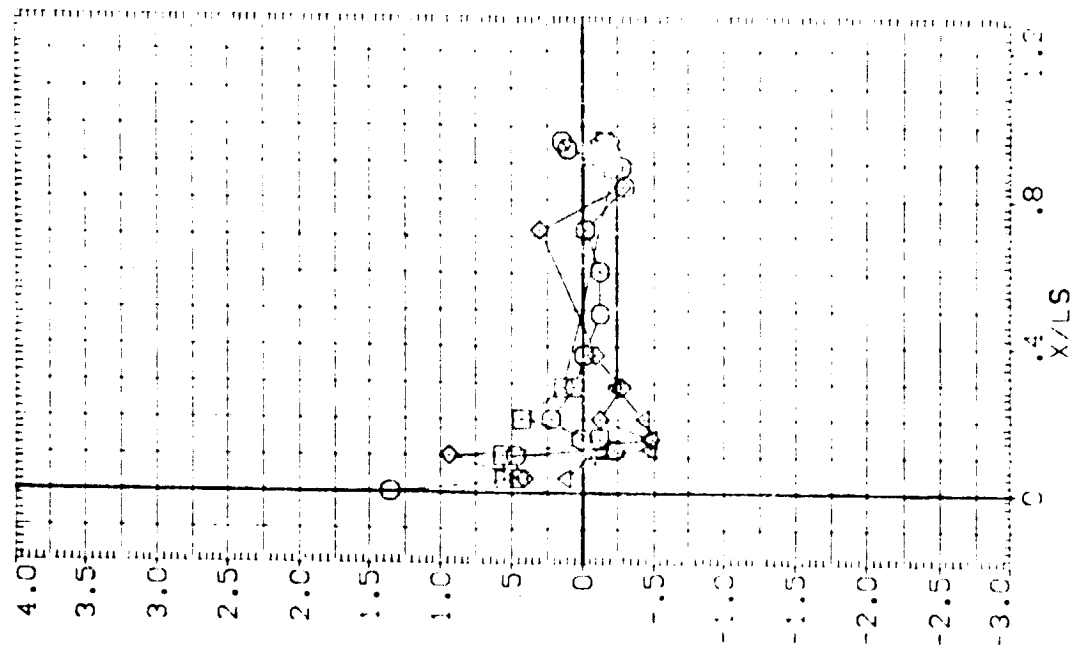


LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:-7:6 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB:S40)

PARAMETRIC VALUES
MACH 1.400
ELEVEN .000
RUDDER .000
SP08PM .000

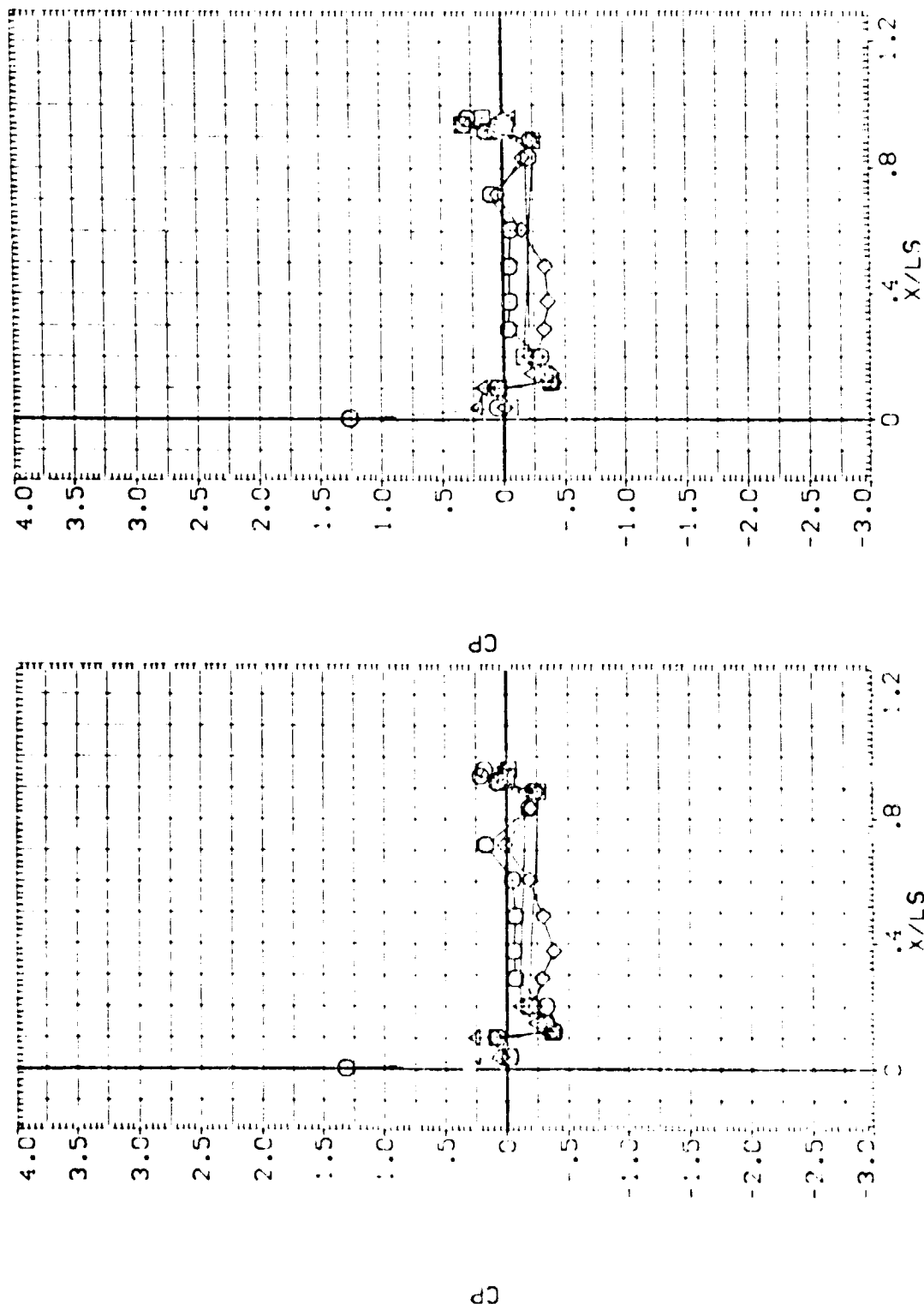
SYMBOL PH1 BETA1 A1PHAT
O 180.000 -8.190 -8.470
◇ 275.000 .000
△ 270.000
315.000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC:-716 1A14 01+712+S12.25+AT11 SRM BOOSTER (R81S40)

SYMBOL	PHI	BETA	ALPHA	MACH	ELEVON	SPD
○	.000	4.120	-8.430	1.400	.000	.000
◇	45.000	8.270		.000	SPD	
△	90.000					
▽	135.000					



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 DM BOOSTER (RB1S40)

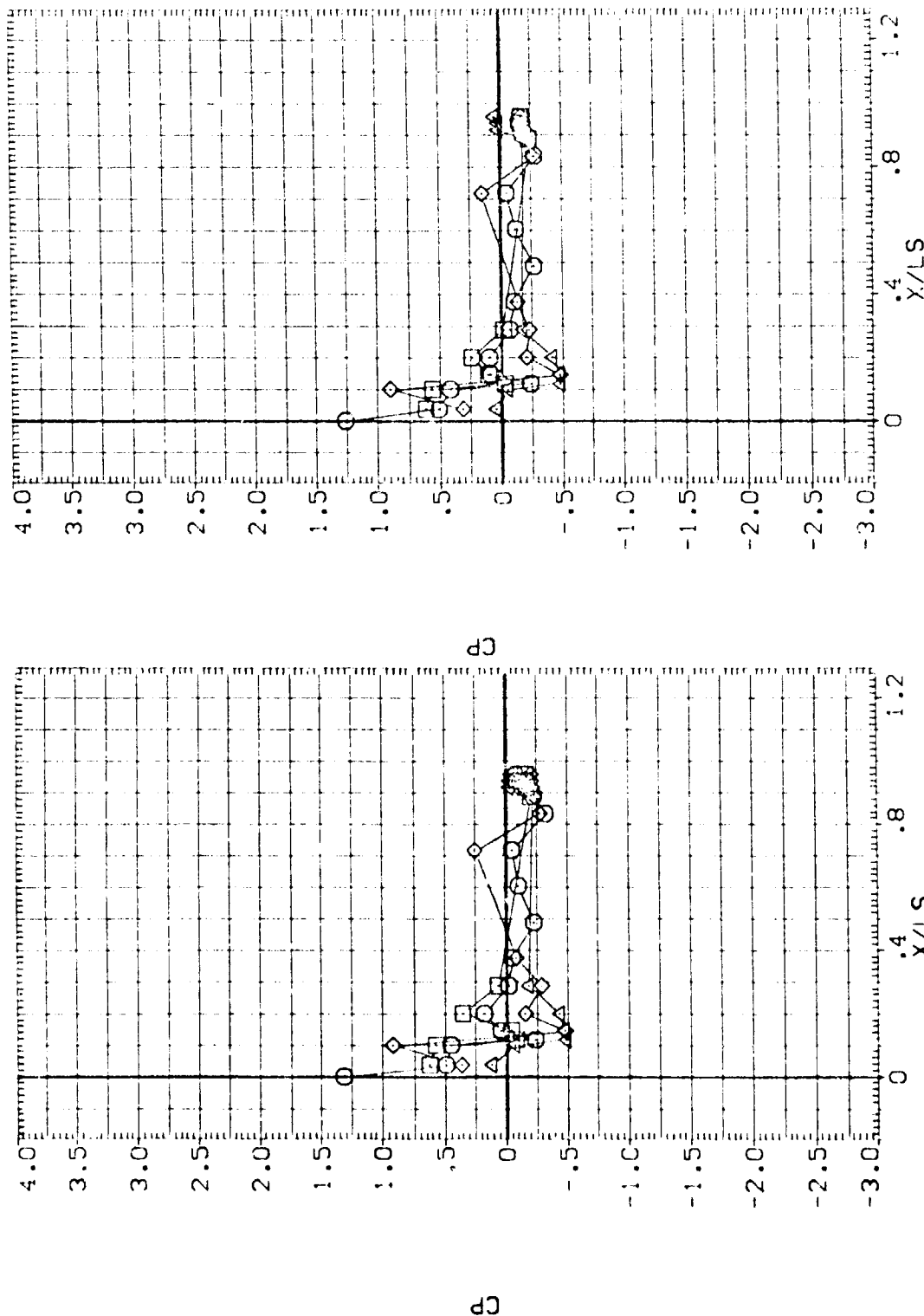
SYMBOL
 ○ □ ◇ △

PHI 180.000
 225.000
 270.000
 315.000

BETAT 4.120
 8.270

ALPHAT -8.430

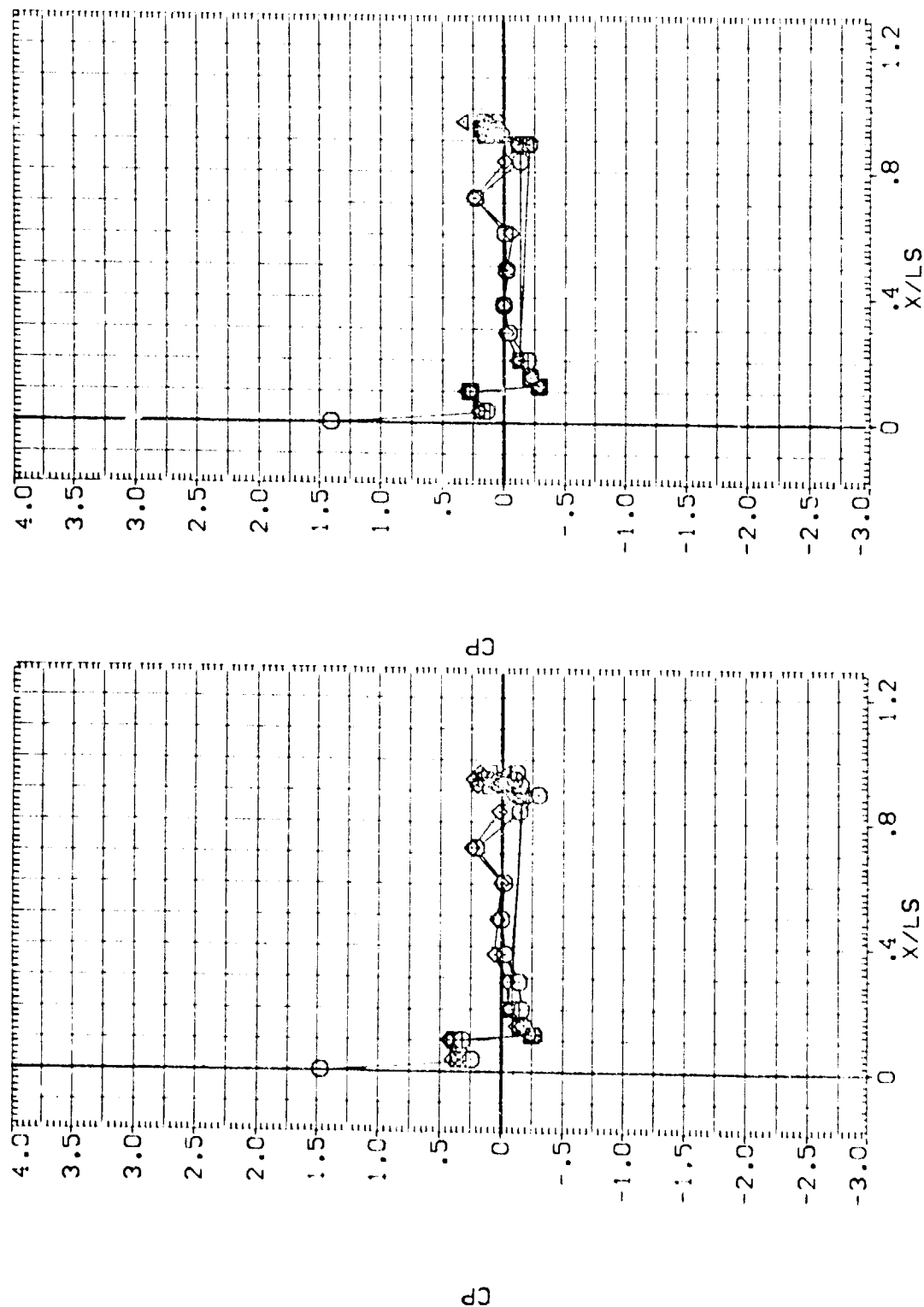
PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 SRM BOOSTER (RB1S40)

SYMBOL	PHI	BETAT	ALPHAT	PARAMETRIC VALUES
○	.000	-8.230	-.560	MACH 1.400 ELEVCH .000
□	45.000	-.010		RUDDER .000 SPDRK .000
◇	90.000			
△	135.000			



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S40)

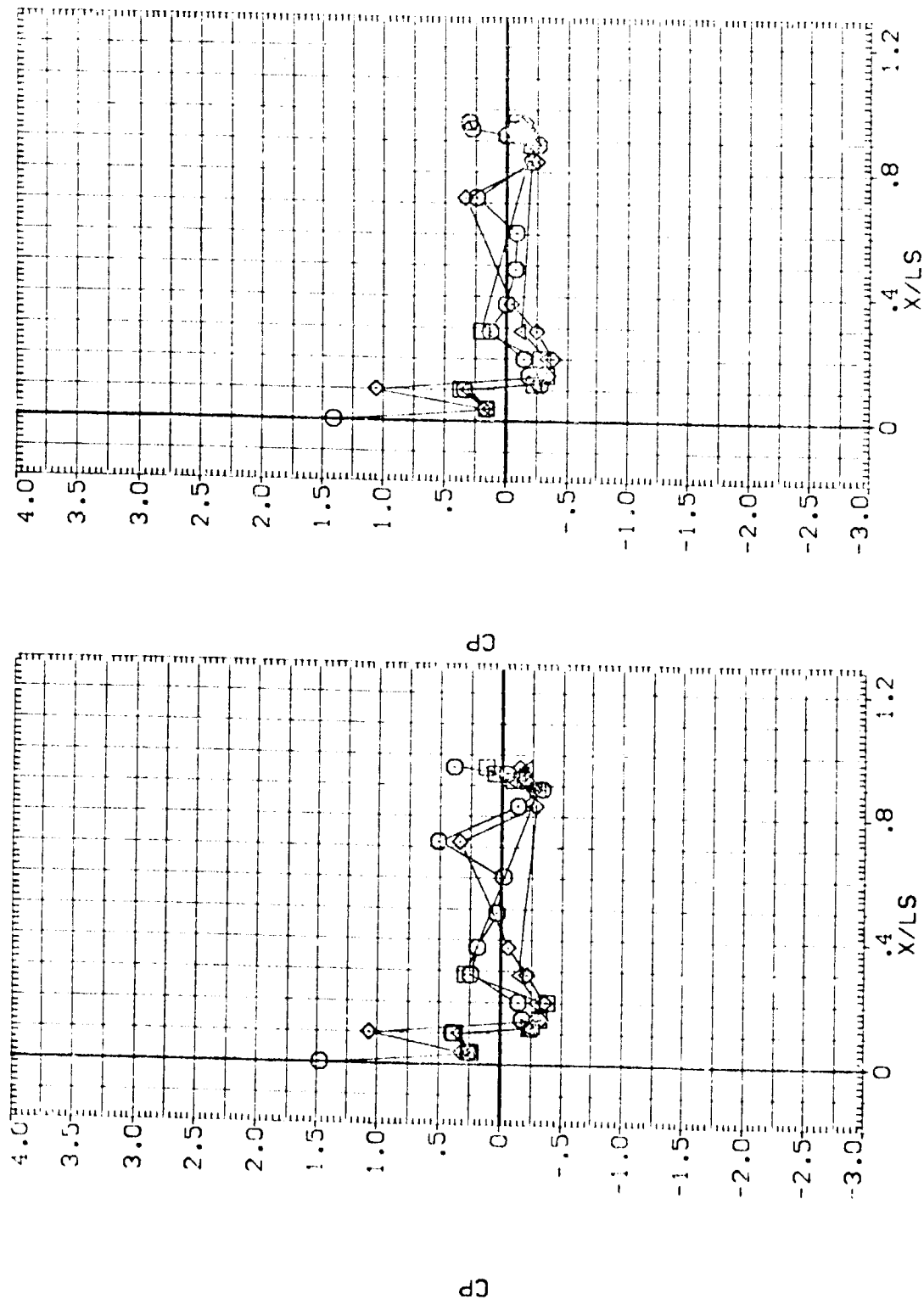
SYMBOL

180.000
225.000
270.000
315.000

BETAT
-8.230
-0.010

ALPHAT
-0.560

PARAMETRIC VALUES
MACH 1.400
RUDDER .000
ELEVON .000
SPDBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S40)

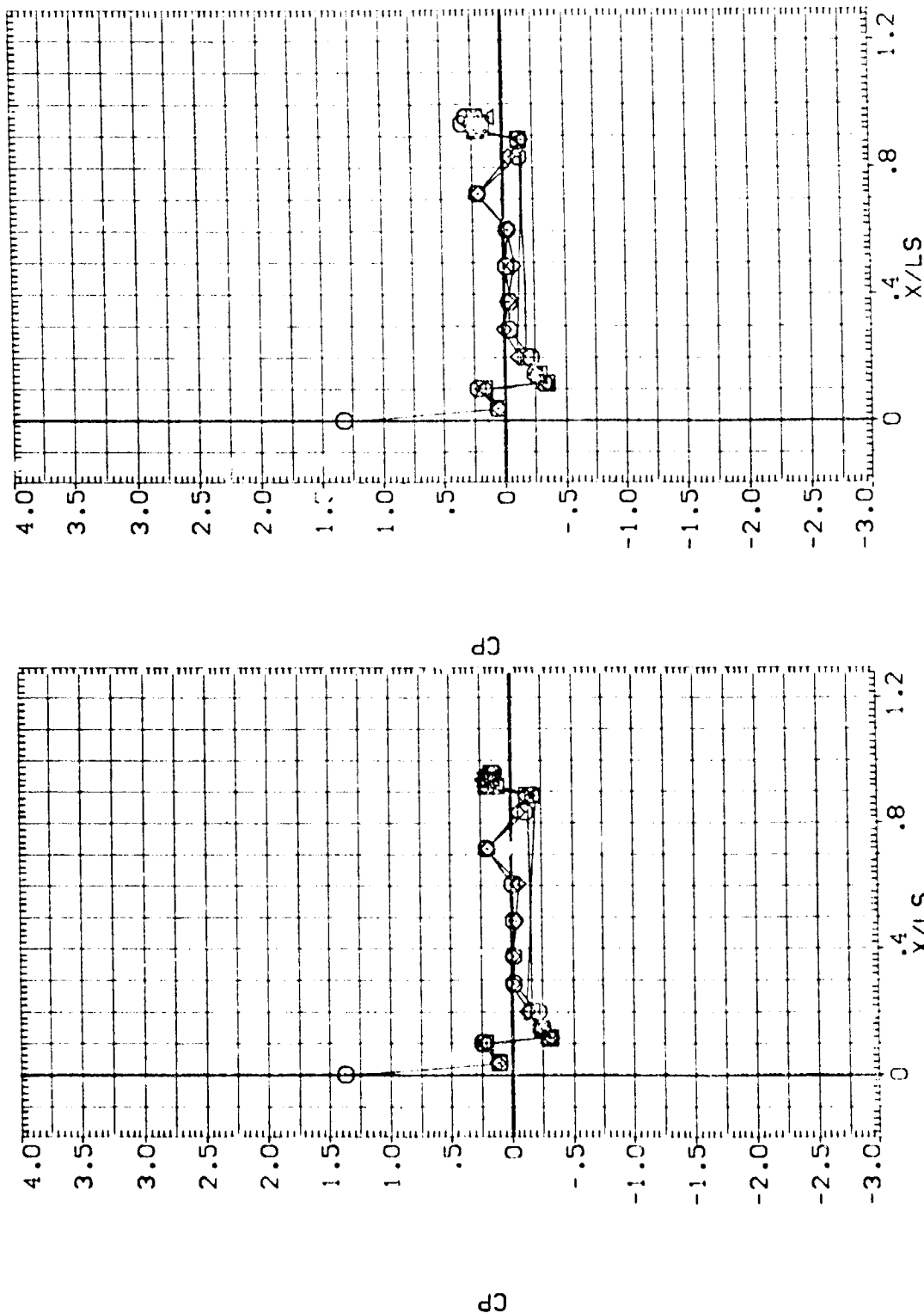
SYMBOL
 O □ ◇ △

PHI .000
 45.000
 90.000
 135.000

BETAT 4.110
 8.210

ALPHAT - .550

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOILER .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 SRM BOOSTER (R31S40)

SYMBOL

PHI

BETAT

ALPHAT

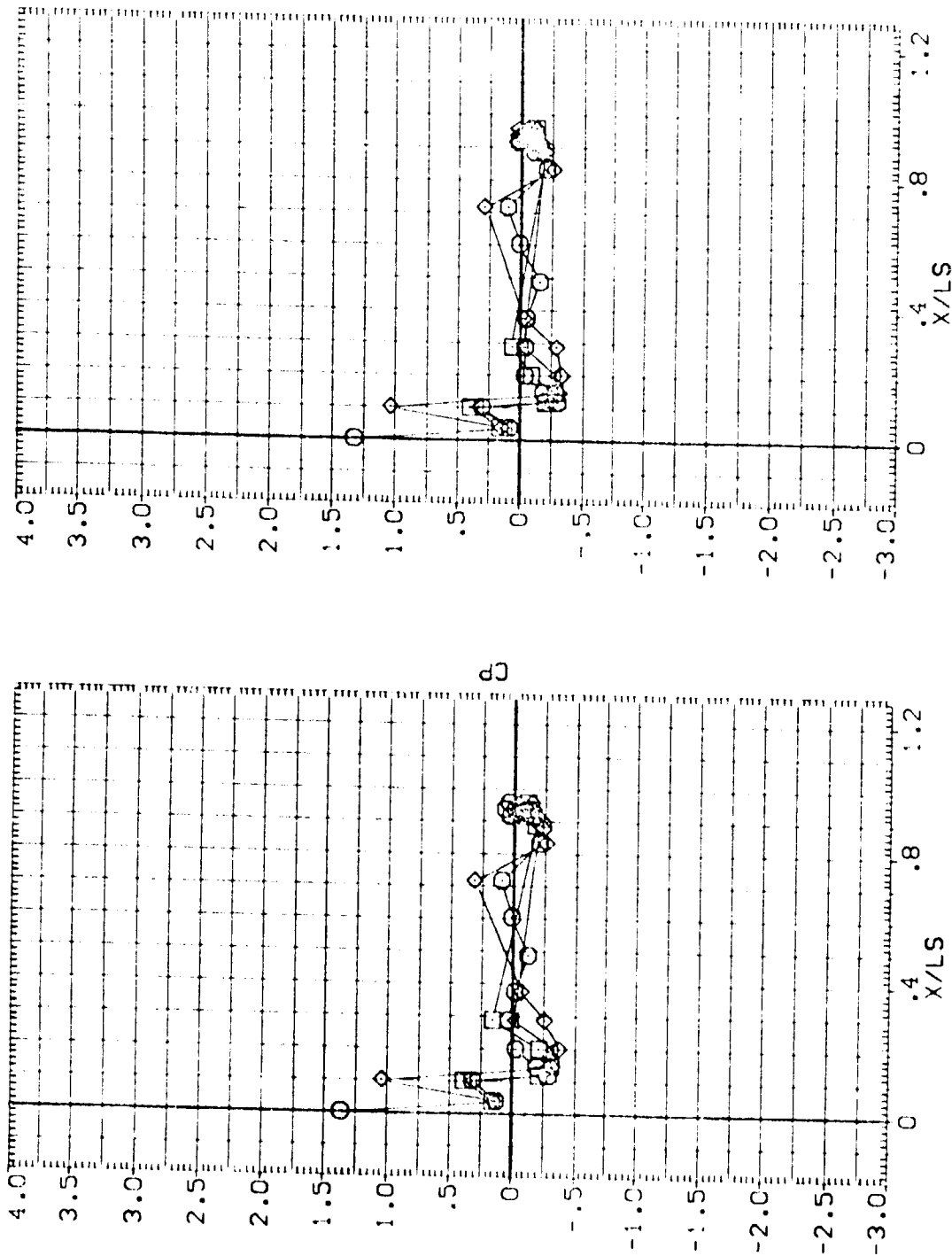
180.000
225.000
270.000
315.000

4.110
8.210

-.550

PARAMETRIC VALUES

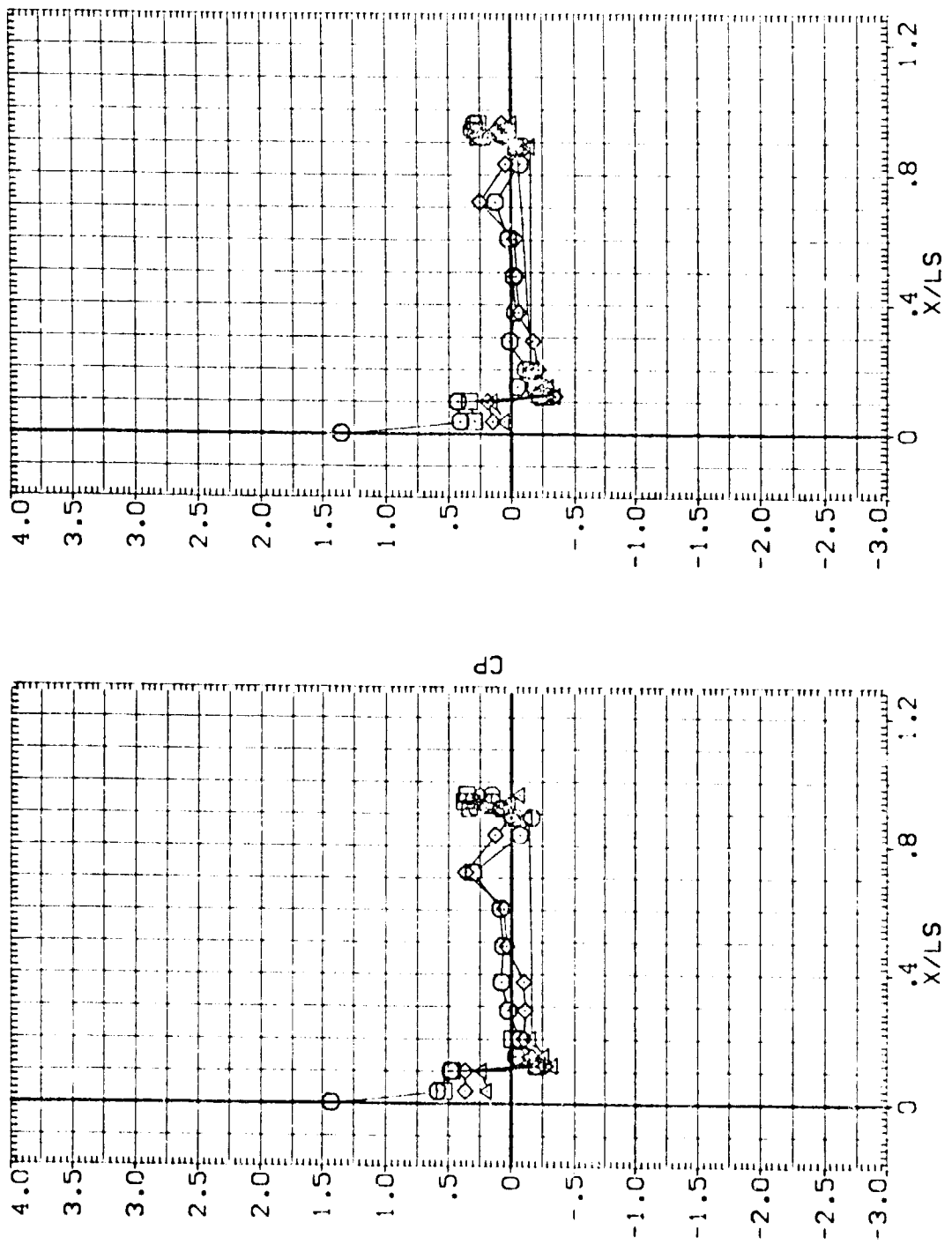
MACH 1.400
ELEVON .000
RUDDER .000
SPDRM .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S40)

SYMBOL	PHI	BETAT	ALPHAT	MACH	PARAMETRIC VALUES
○	.000	-8.220	8.120	RUDDER	1.400 ELEVON .000
□	45.000	.000			SPOBRK .000
◇	90.000				
△	135.000				



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S4CJ)

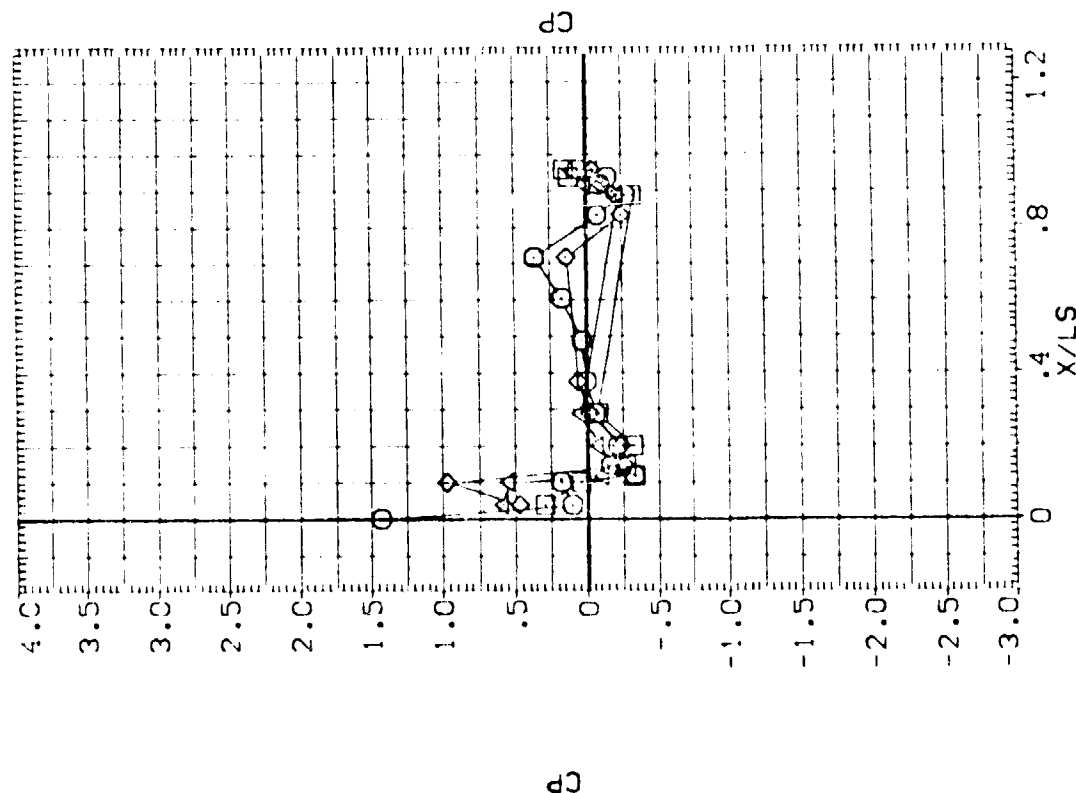
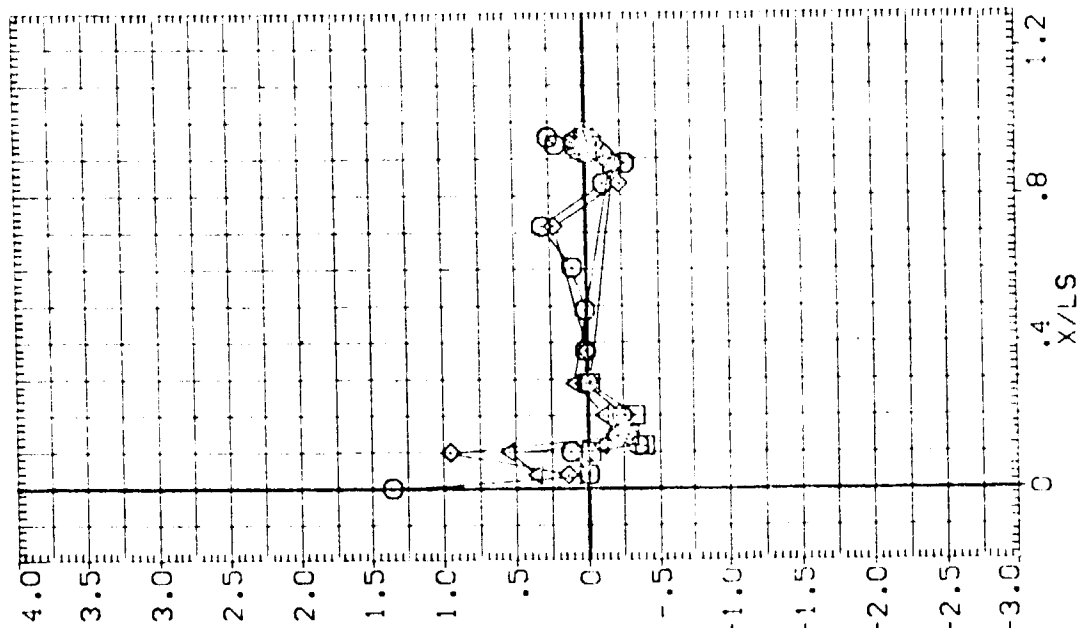
SYMBOL

100.000
275.000
270.000
315.000

BETAT -8.220
ALPHAT 8.120
.000

PARAMETRIC VALUES

MACH 1.400
RUDDER .000
ELEVON .000
SPDBR .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

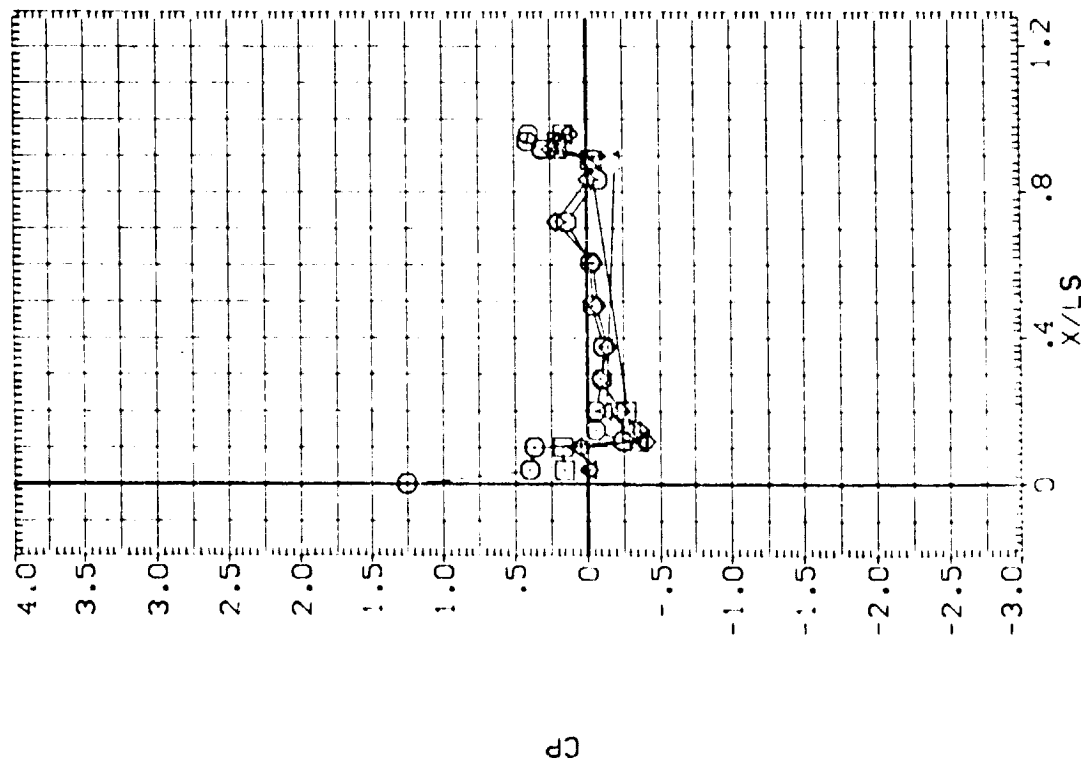
ARC11-716 1A14 01+T12+S12N25+AT11 SRM BOOSTER (RB1S40)

SYMBOL
○
◇
△

PHI .000
45.000
90.000
135.000

BETAT 8.300
ALPHAT 8.150

PARAMETRIC VALUES
MACH 1.400
ELEVON .000
RUDDER .000
SPDBRK .000



LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

ARC11-716 1A14 01+112+S12N25+AT11 SRM BOOSTER (RB:S40)

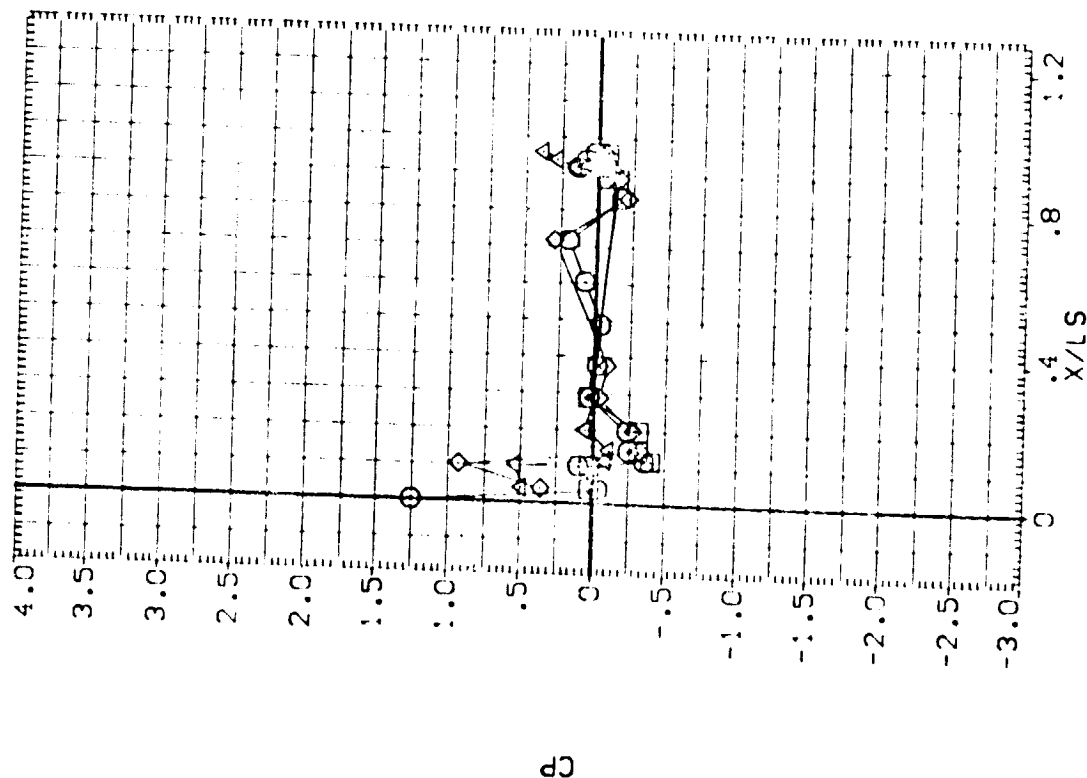
SYMBOL

PHI
180.000
225.000
270.000
315.000

BETAT
8.300
ALPHAT
8.150

PARAMETRIC VALUES

MACH 1.400
RUDDER .000
ELEVON .000
SPOILER .000

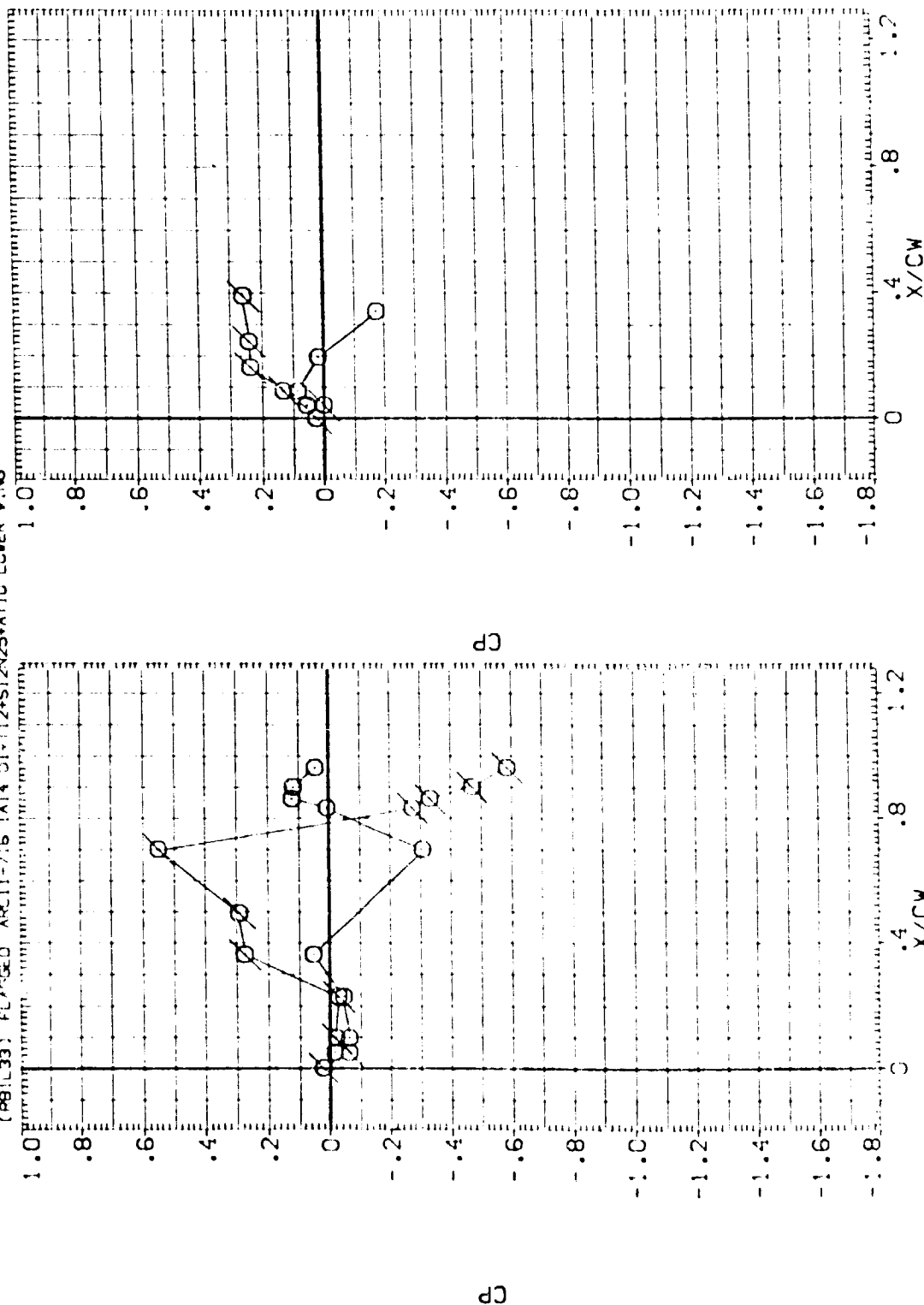


LONGITUDINAL DISTRIBUTION OF SRM BOOSTER PRESSURES

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000

SYMBOL ALPHAAD Y/BV BETAAD
O -7.60 .299 -8.420
.364

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(PB1U33) OPEN ARC11-716 [A]4 [O]T12+S12N25+AT10 UPPER WING
(PB1L33) FLANGED ARC11-716 [A]4 [O]T12+S12N25+AT10 LOWER WING

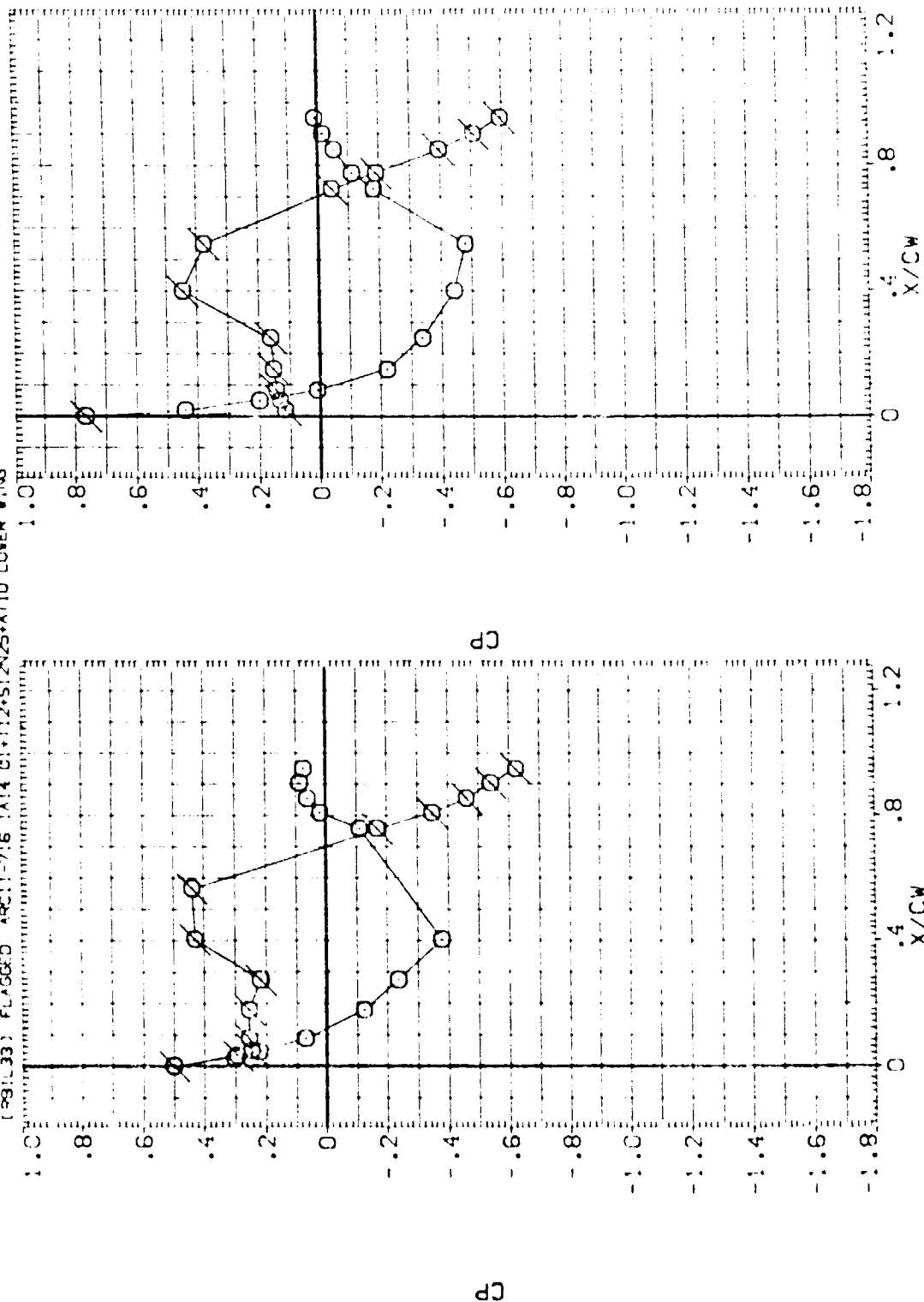


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES	
1.250	ELEVON .000
.000	SPOBRK .000

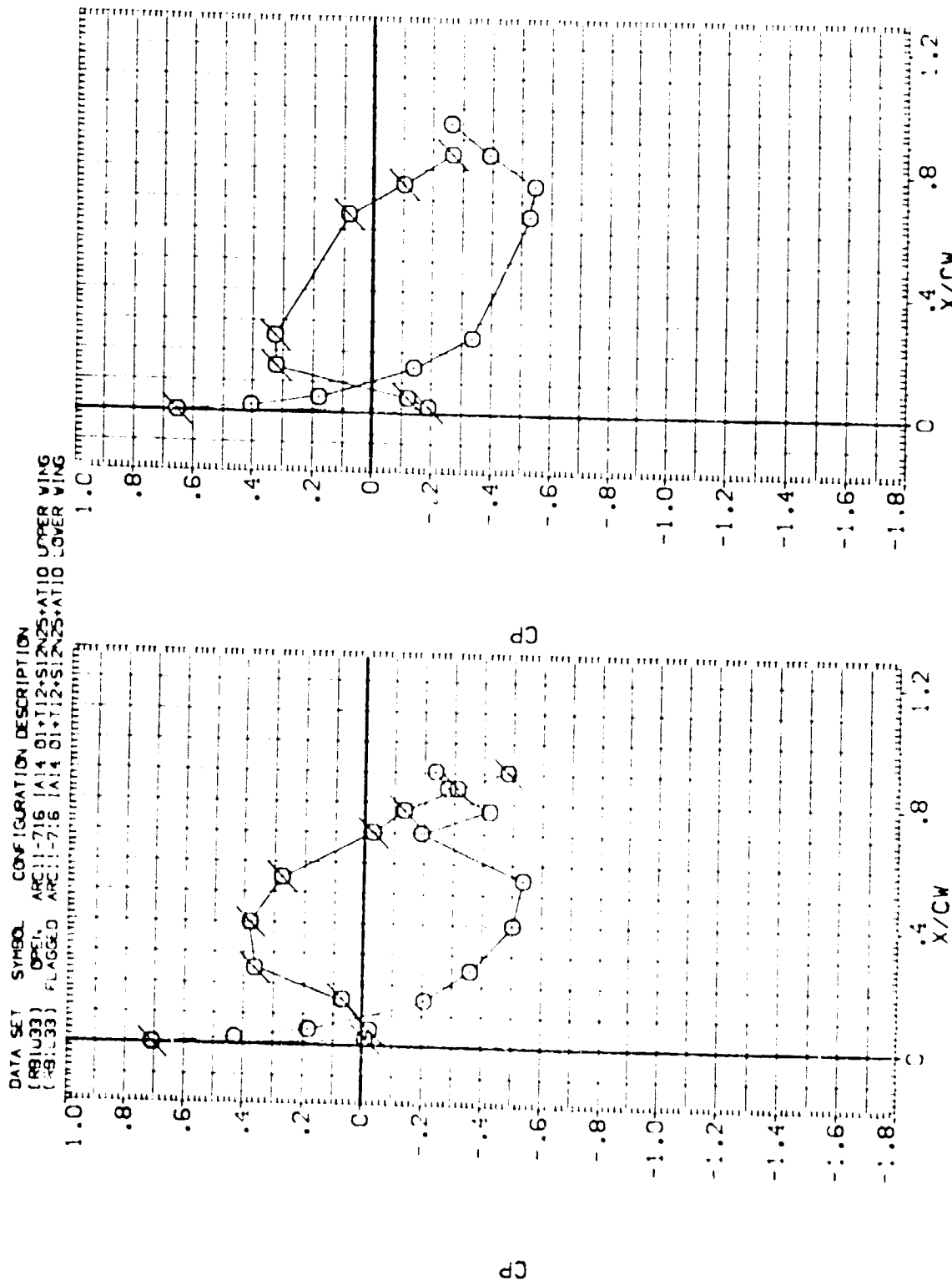
SYMBOL	ΔP_{H2O}	Y/BA	BETA
○	-.760	.427	-8.420
		.534	

DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION
(R81U33)	OPEN	ARC11-716 1A14 01+T12+S12X25+AT10	UPPER WING
(R81U33)	FLAGGED	ARC11-716 1A14 01+T12+S12X25+AT10	LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL \bigcirc ALPHA -7.60 Y/B $.673$ BETA -8.420
 MACH 1.250 RUDDER $.000$ ELEVON $.000$ SPOBRK $.000$

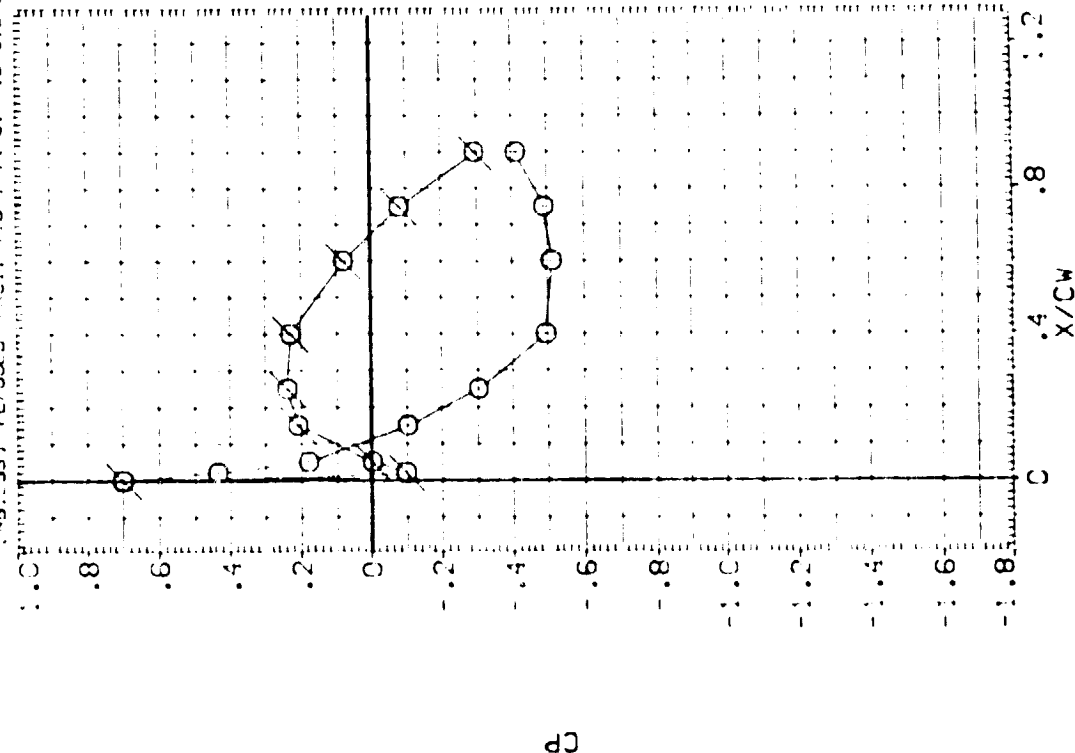


MACH
 RUDDER

PARAMETRIC VALUES
 1.250
 .000
 ELEVON
 SPDRK
 .000
 .000

SYMBOL ALPHA0 1/B₀ BETA0
 0 -1.760 .887 -8.420

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (99) (33) OPEN ARC11-716 1A 4 01 112-512-25-AT10 UPPER WING
 (99) (33) FLASCO ARC11-716 1A 4 01 112-512-25-AT10 LOWER WING

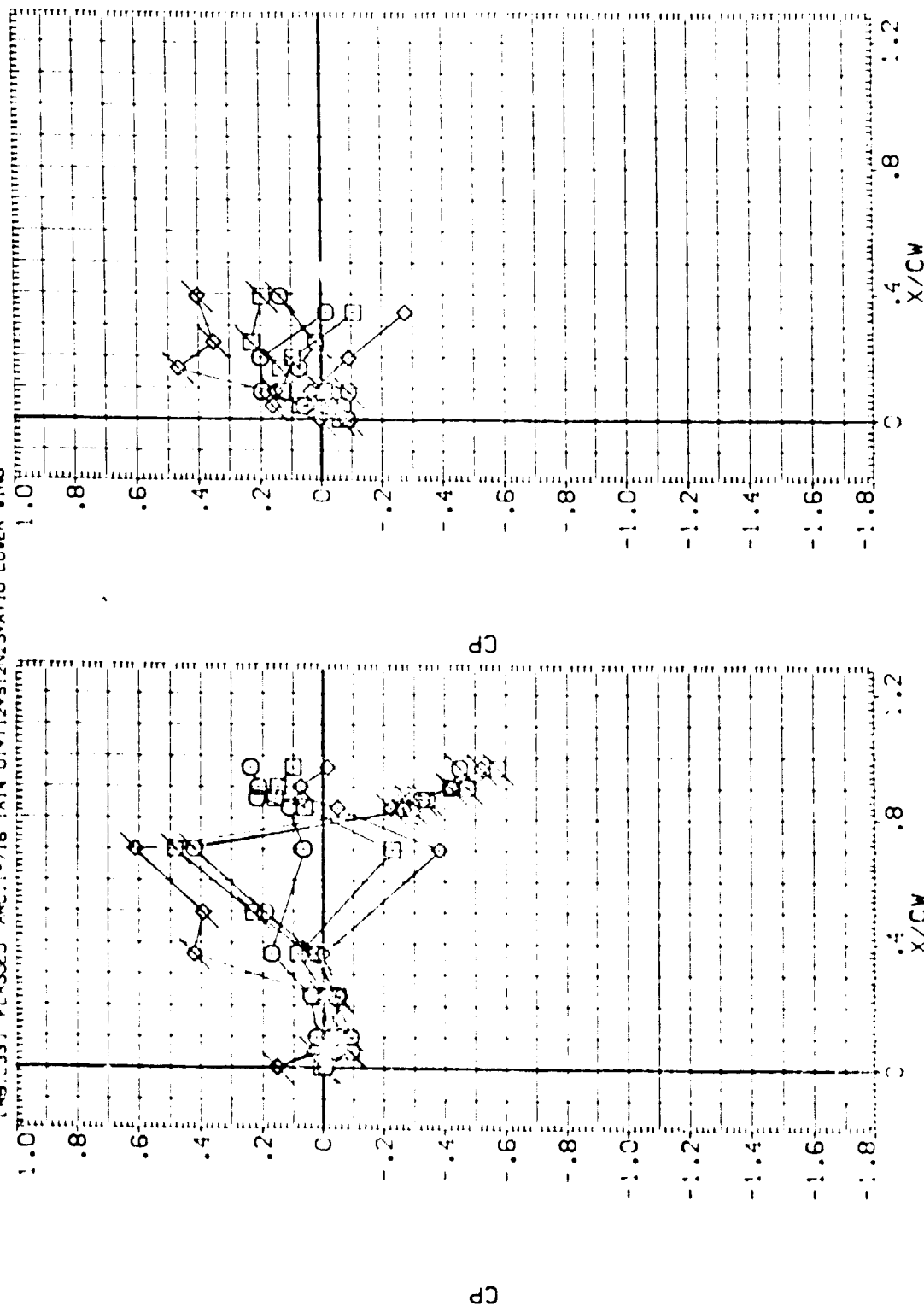


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000

SYMBOL ALPHA0 Y/B0 BETA0
O -8.220 .299 -7.920
X -4.200 .364
◇ 4.300

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R8) (33) OPEN ARC: 11-716 [A] 4 01-112-S12-25+AT10 UPPER WING
(R9) (33) FLAGGED ARC: 11-716 [A] 4 01-112-S12-25+AT10 LOWER WING

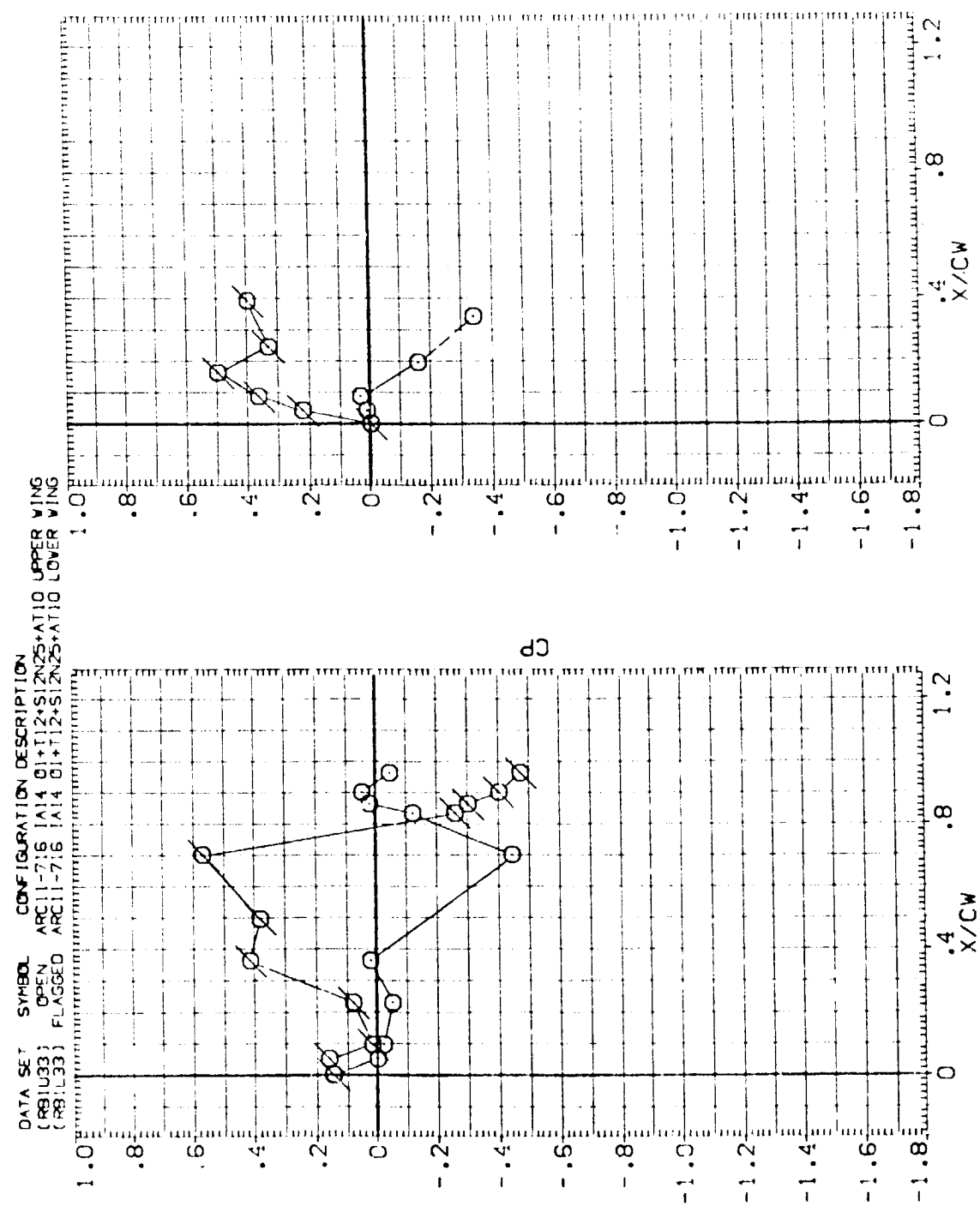


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOILER

MACH
 RUDDER

SYMBOL ALPHA Y/BV BETA
 O 7.910 .299 -7.920
 .364

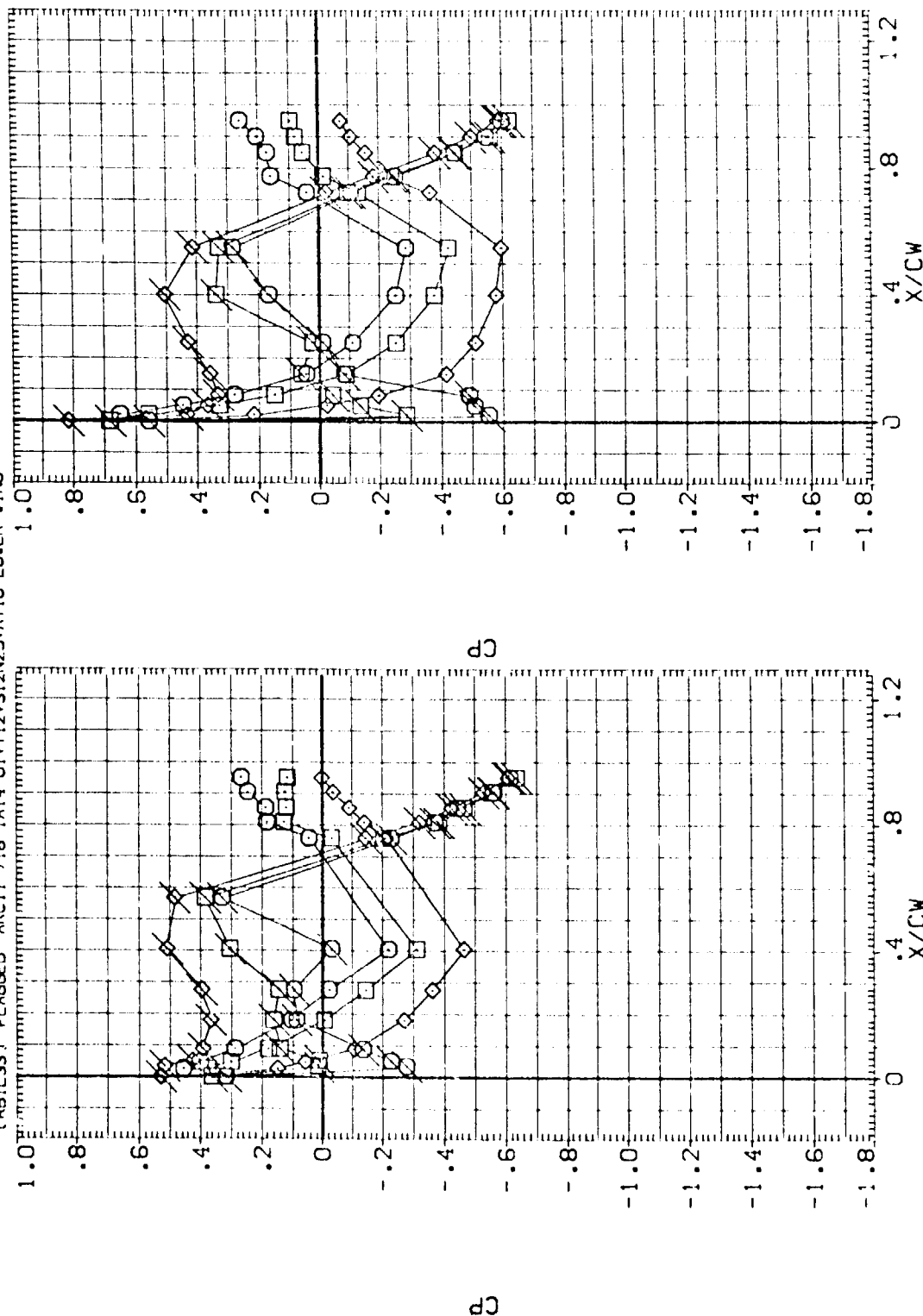


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOBRK .000

SYMBOL ALPHA0 Y/BV BETA0
○ -8.220 .427 -7.920
□ -4.200 .534
◇ 4.300

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R81U33) OPEN ARC11-716 1A14 01+112+512N25+AT10 UPPER WING
(R81L33) FLAGGED ARC11-716 1A14 01+112+512N25+AT10 LOWER WING

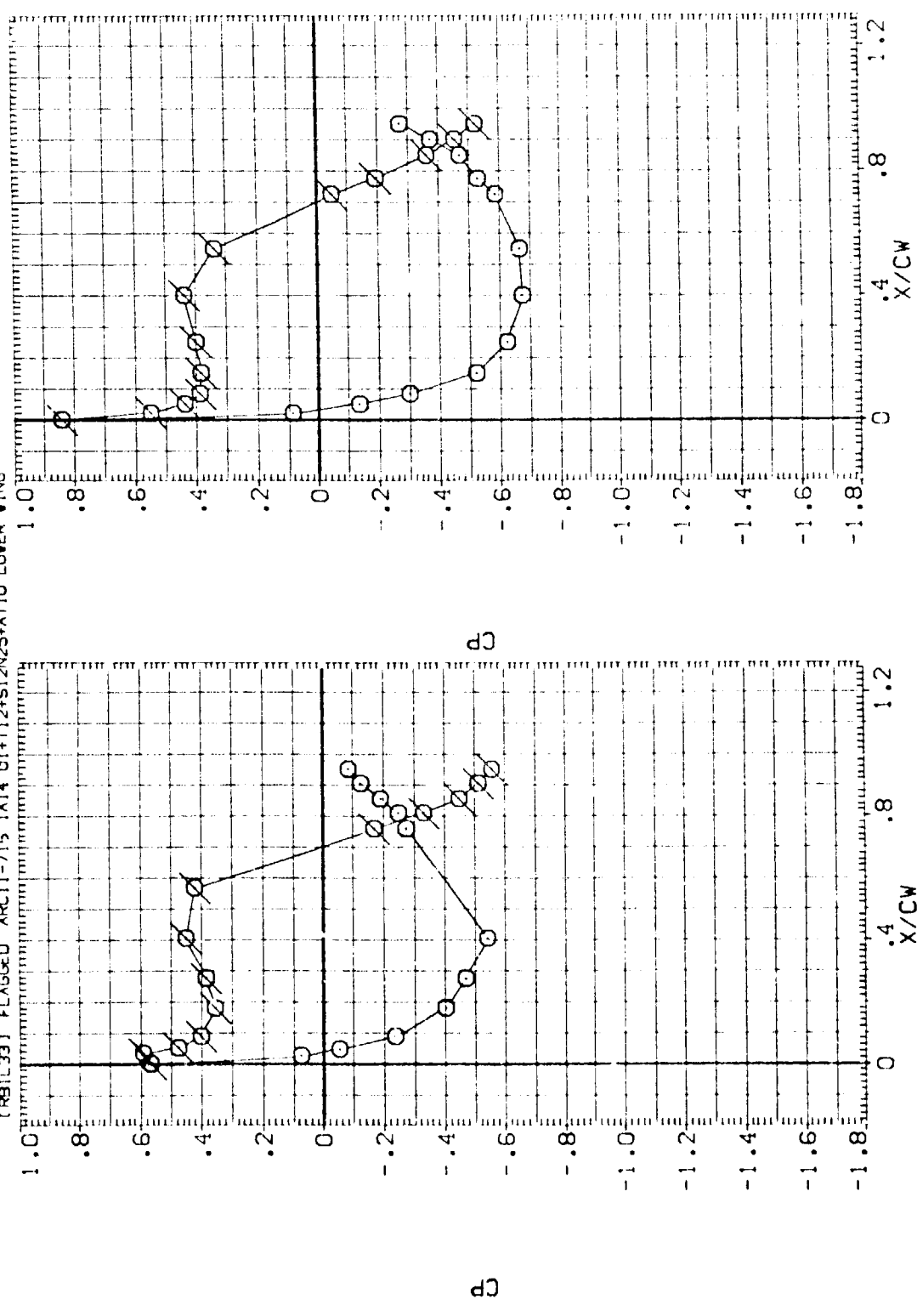


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL ALPHA0 Y/BV BETA0
 O 7.910 .427 -7.920
 .534

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB11J33) OPEN ARC11-716 A14 01+T12+S12N25+AT10 UPPER WING
 (RB12J33) FLAGGED ARC11-715 A14 01+T12+S12N25+AT10 LOWER WING

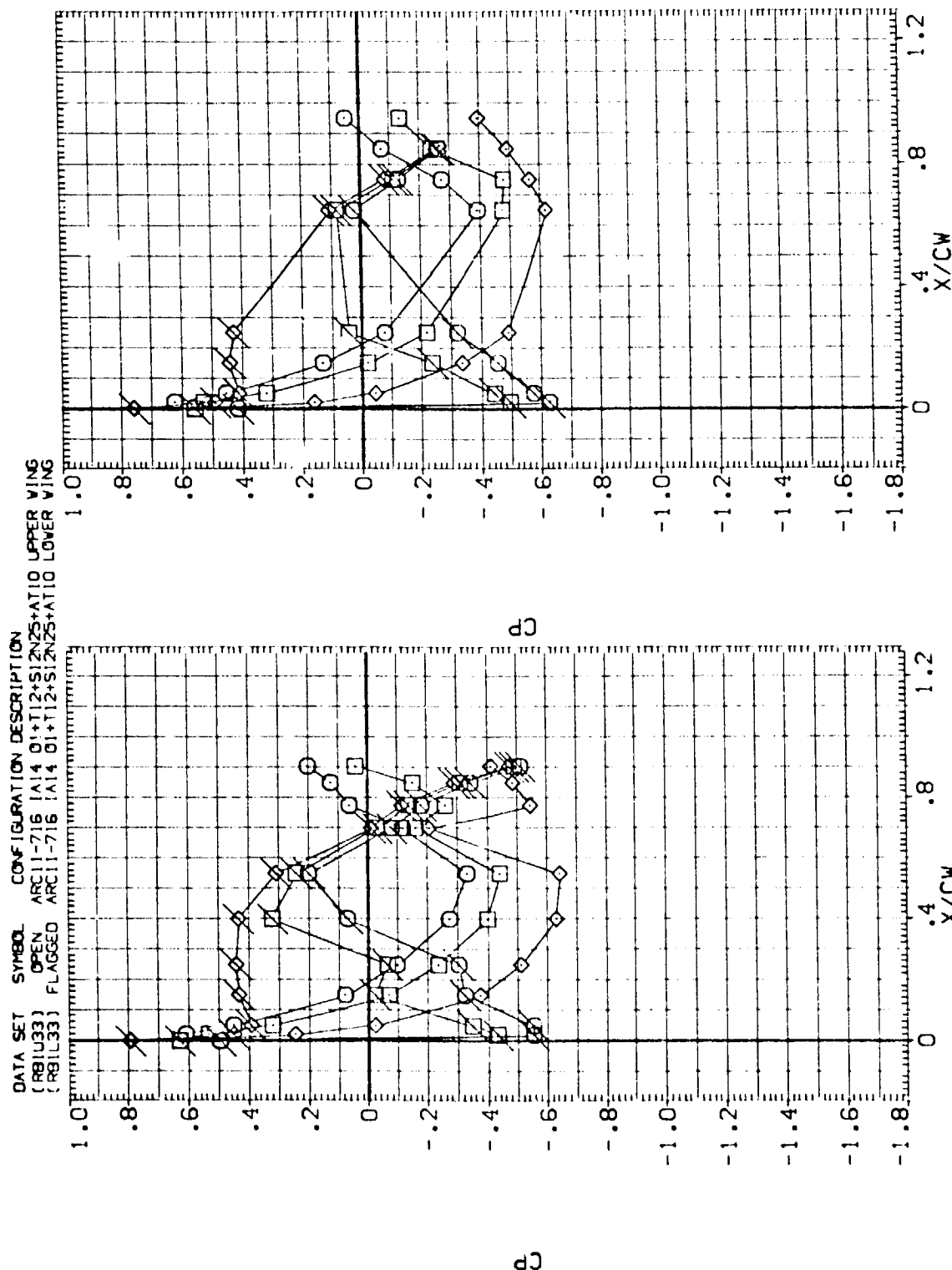


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOBRK

MACH
 RUDDER

SYMBOL ALPHA Y/BV BETA
 ○ -8.220 .673 -7.920
 □ -4.200 .780
 ◇ 4.300



SYMBOL ALPHA

Y/BV BETA

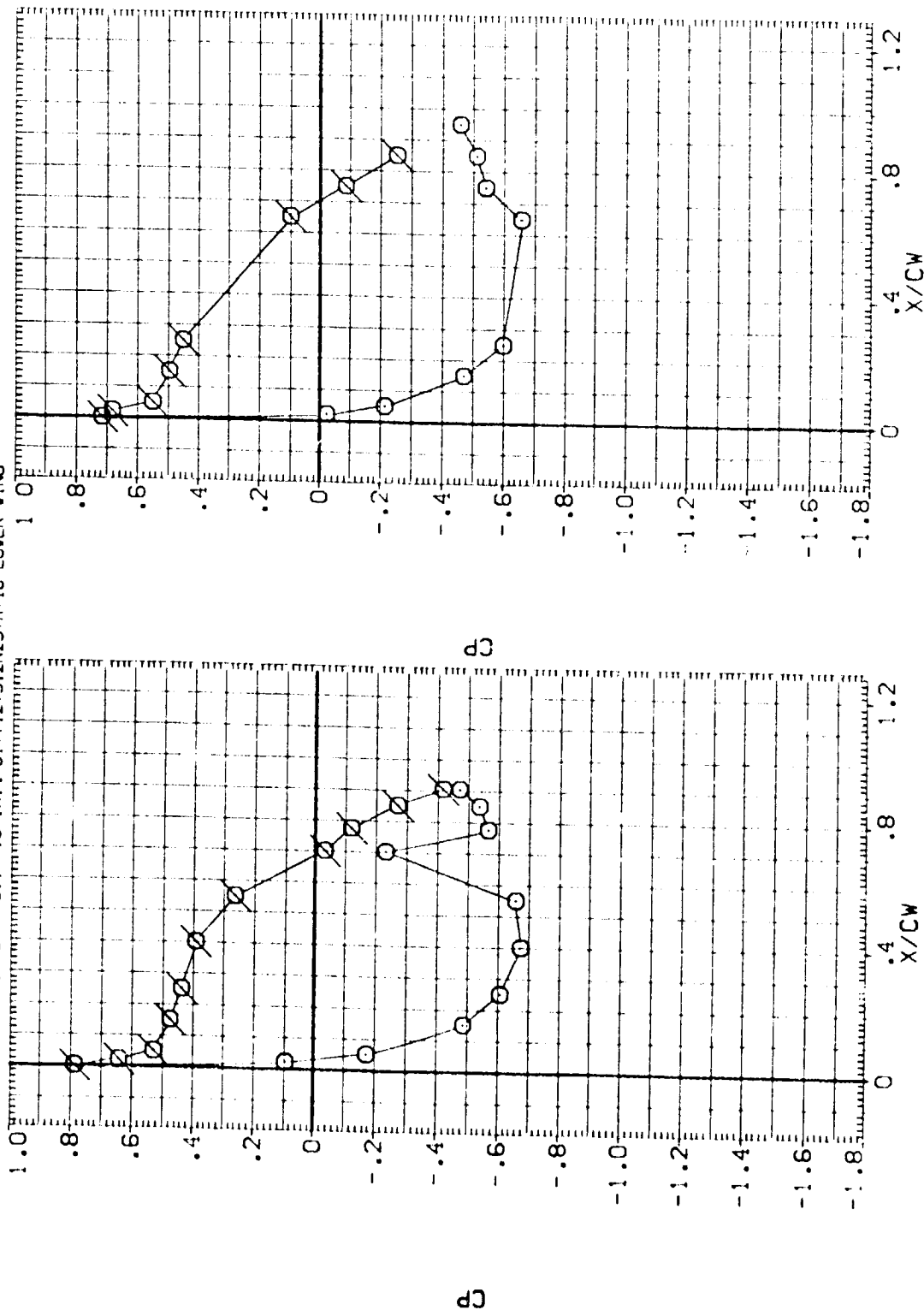
MACH RUDDER

PARAMETRIC VALUES

1.250 ELEVON

.000 SPOBRK

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 1/14 01+T12+S12N25+AT10 UPPER WING
 (R81L33) FLAGGED ARC11-716 1/14 01+T12+S12N25+AT10 LOWER WING

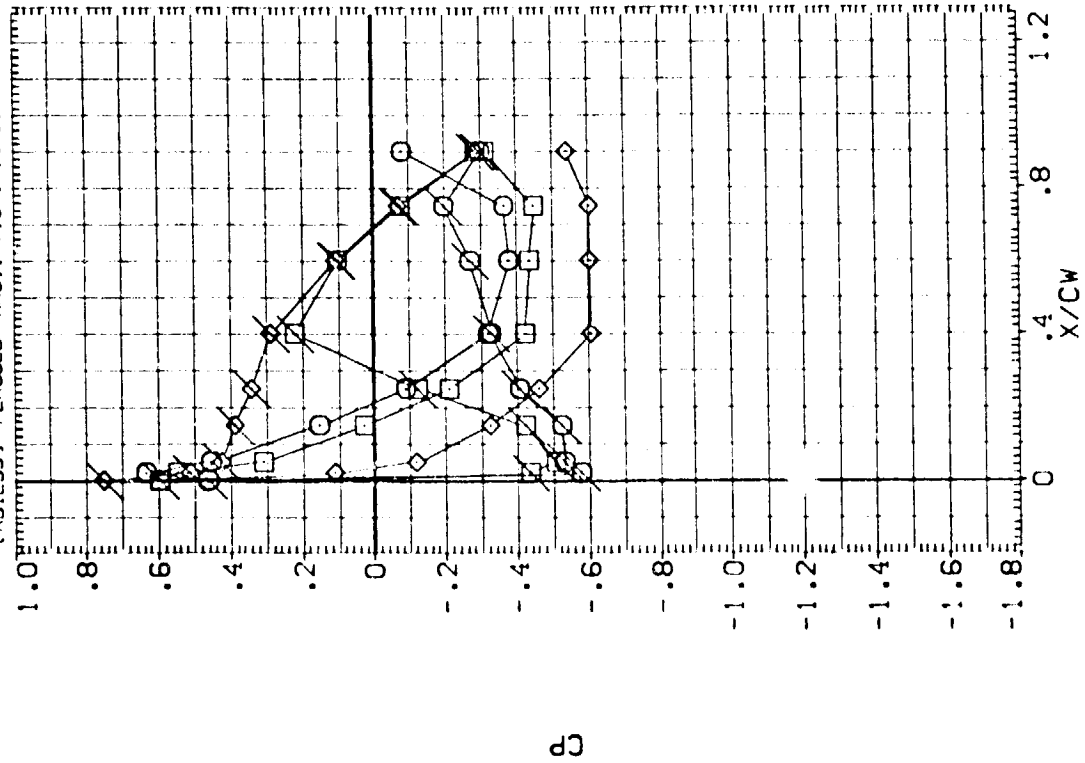


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250
 ELEVON .000
 RUDDER .000

SYMBOL ALPHA_W Y/BV BETA_W
 O -8.220 .887 -7.920
 [-4.200
 ◇ 4.300

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 1A14 01+112+S12N25+AT10 UPPER WING
 (R81L33) FLAGGED ARC11-716 1A14 01+112+S12N25+AT10 LOWER WING

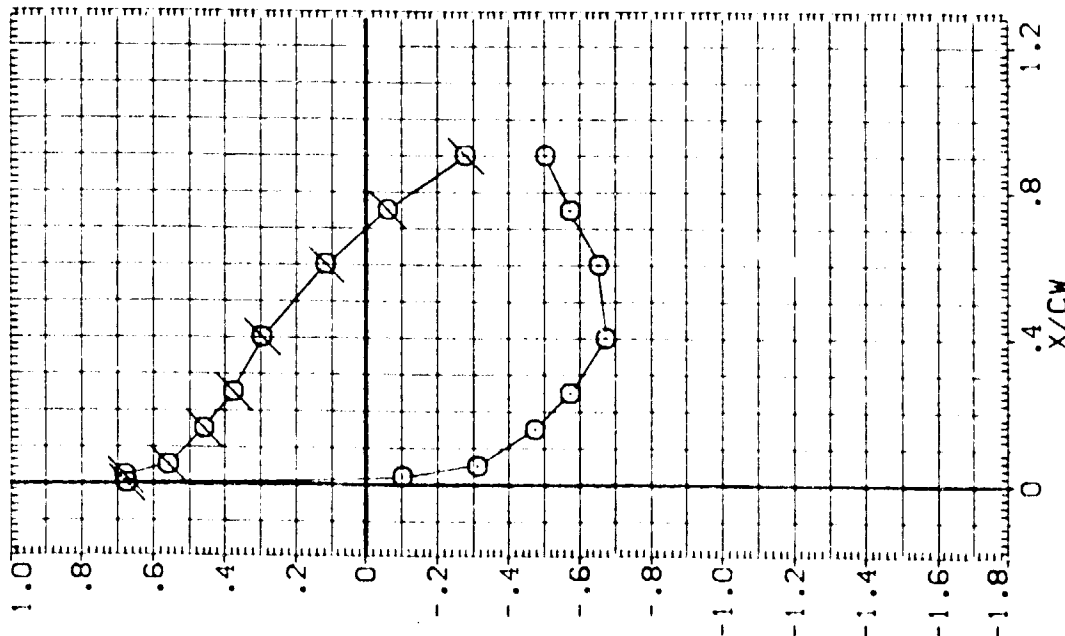


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000

SYMBOL ALPHA Y/BV BETA
 O 7.910 .887 -7.920

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 [A14 01+112+512N25+AT10 UPPER WING
 (R81L33) FLAGGED ARC11-716 [A14 01+112+512N25+AT10 LOWER WING



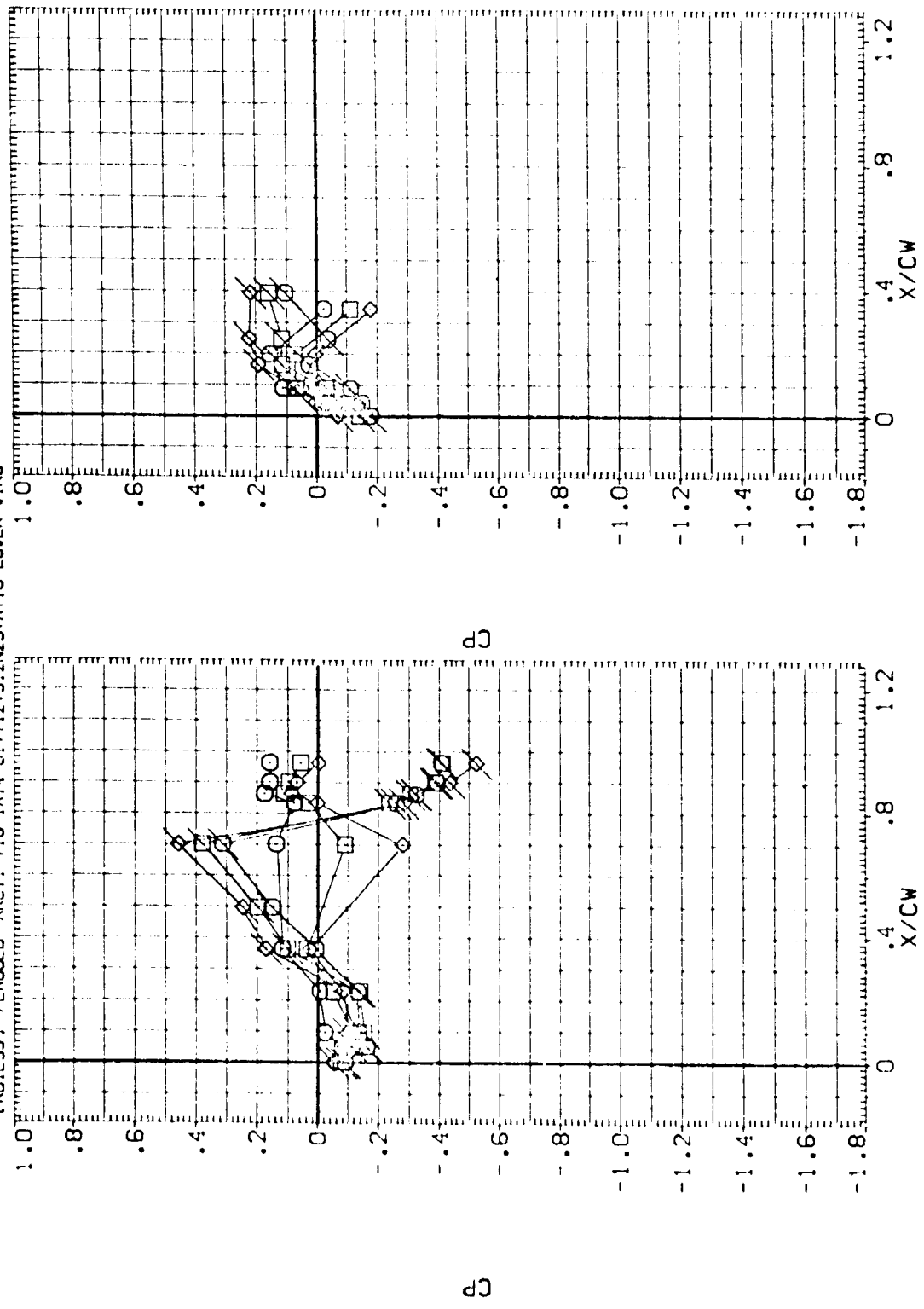
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOBRK .000

ALPHA -8.220
 Y/BV .299
 BETA0 -3.960

SYMBOL
 ○ OPEN
 □ FLAGGED
 ◇

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1U33) OPEN ARC11-716 1A14 01+T12+S12N25+AT10 UPPER WING
 (RB1U33) FLAGGED ARC11-716 1A14 01+T12+S12N25+AT10 LOWER WING

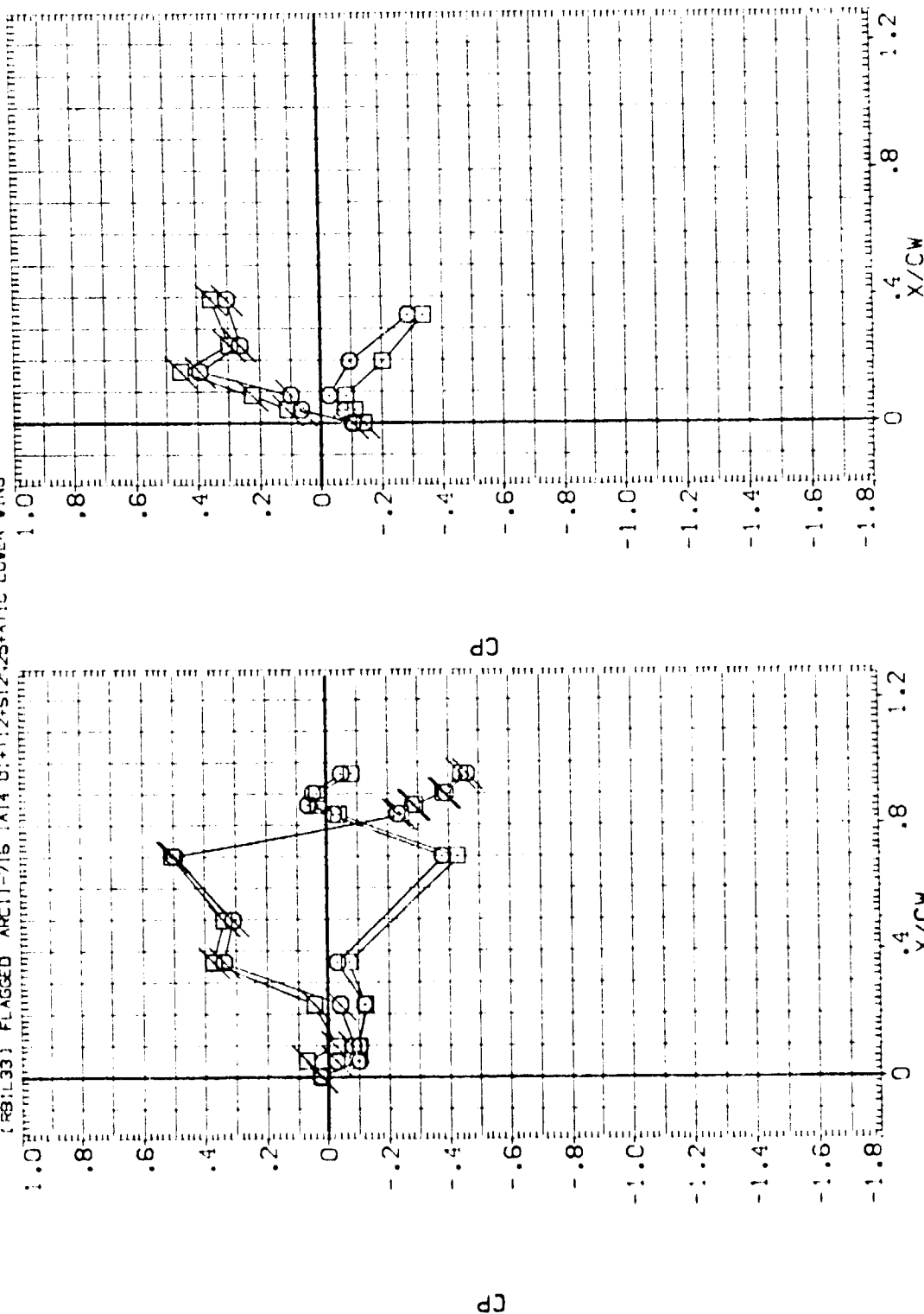


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000

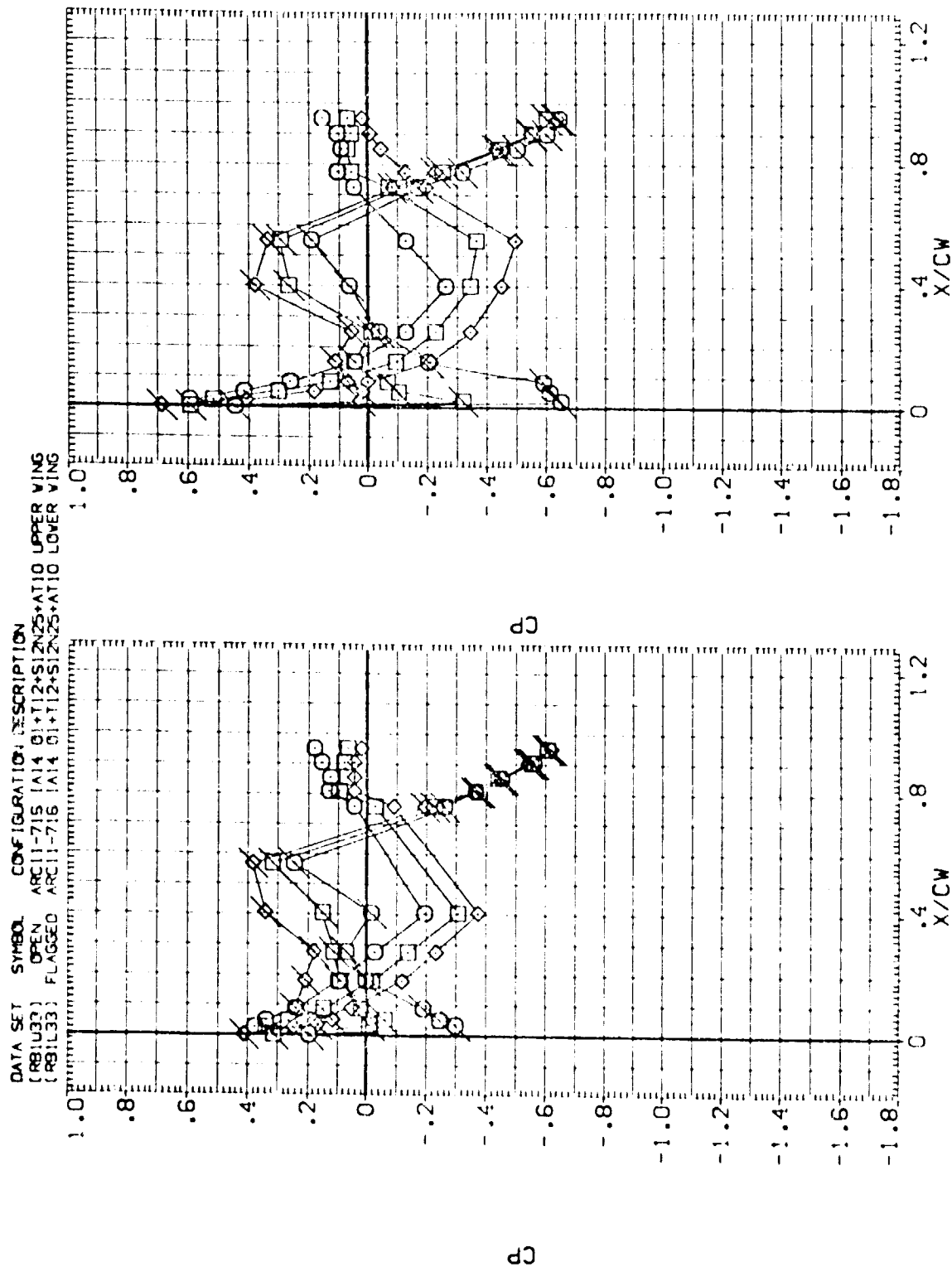
SYMBOL ALPHA0 Y/BV BETA0
 4.300 .299 -3.960
 7.910 .364

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 [A14 Q1+T12+S12+25+AT10] UPPER WING
 (R81U33) FLAGGED ARC11-716 [A14 Q1+T12+S12+25+AT10] LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA0	Y/BV	BETA0	MACH	PARAMETRIC VALUES
○	-8.220	.427	-3.960	RUDDER	1.250 ELEVON
◇	-4.200	.534			.000 SPOBRK
	-1.760				.000



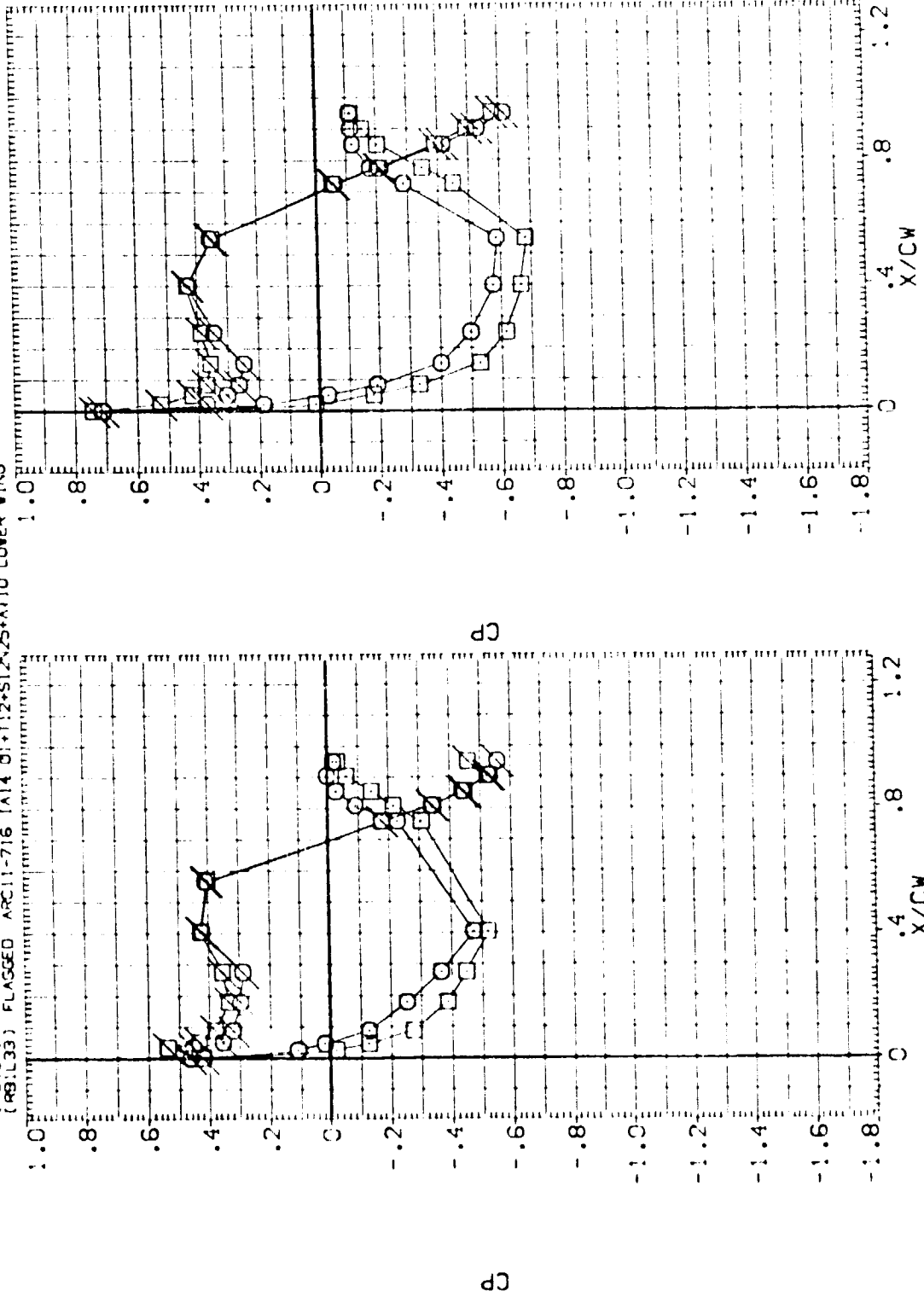
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOBRK
 .000

MACH
 RUDDER

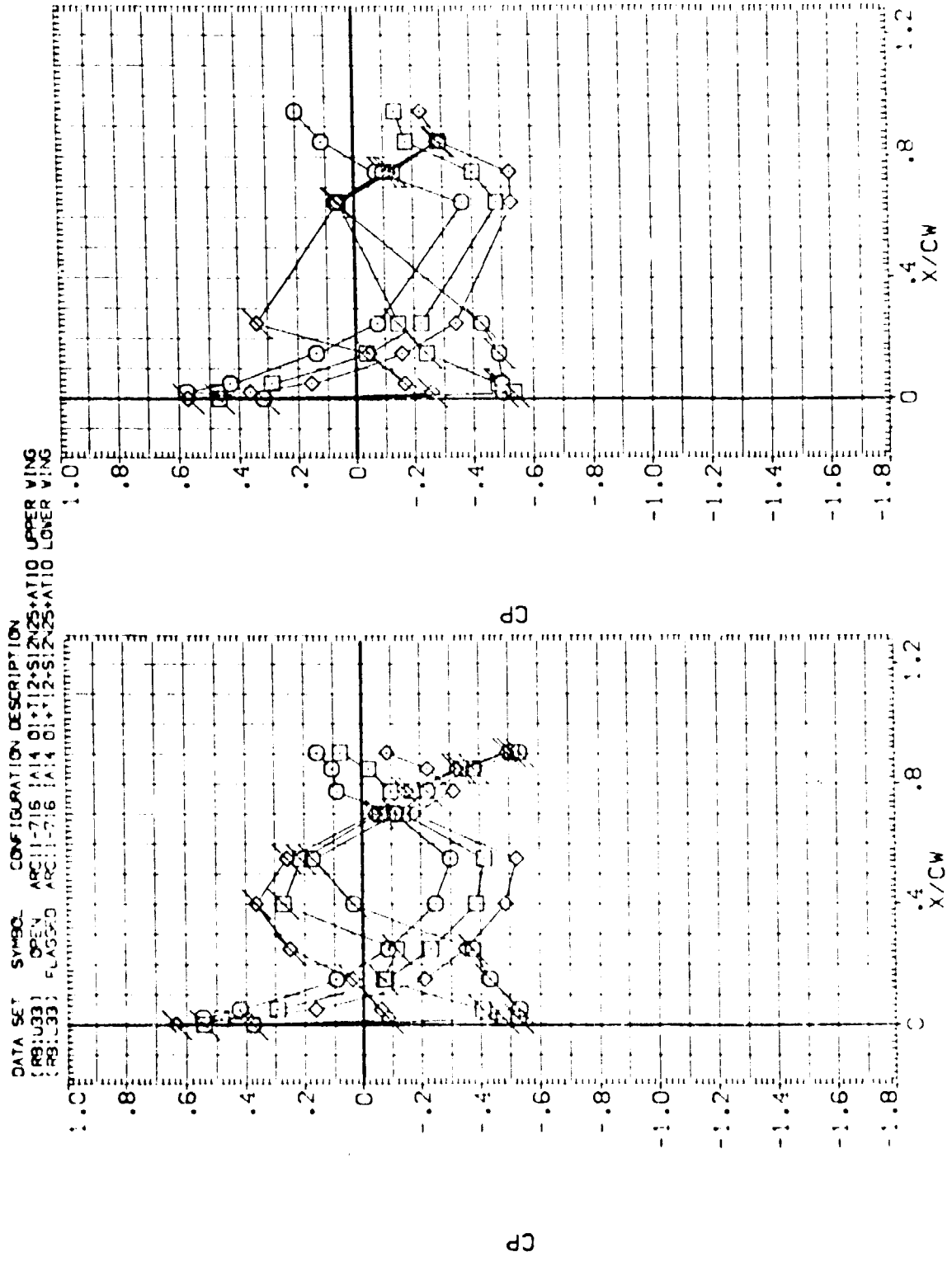
ALPHA 4.300
 7.910
 .427
 .534
 BETA -3.950

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1U33) OPEN ARC11-716 [A14 01+T12+S12+25+AT10] UPPER WING
 (RB1L33) FLAGGED ARC11-716 [A14 01+T12+S12+25+AT10] LOWER WING



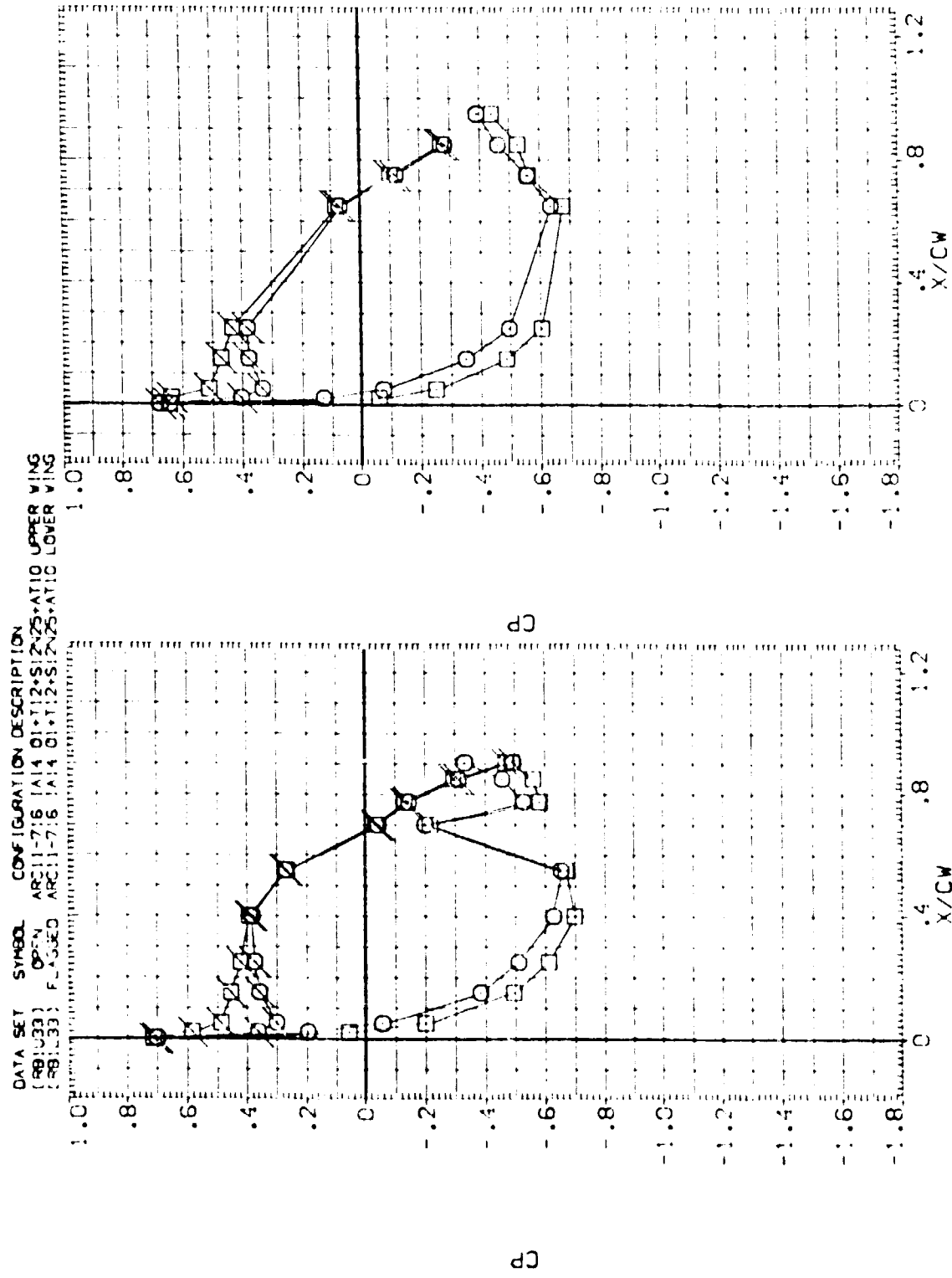
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.220	.573	-3.960	RUDDER	1.250 ELEVON .000
◇	-4.200	.780			.000 SPOILER .000
◇	-7.60				



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
101	4.700	.673	-3.960	RUDDER	1.250 ELEVON .000
	7.910	.780			.000 SPEEDRY .000



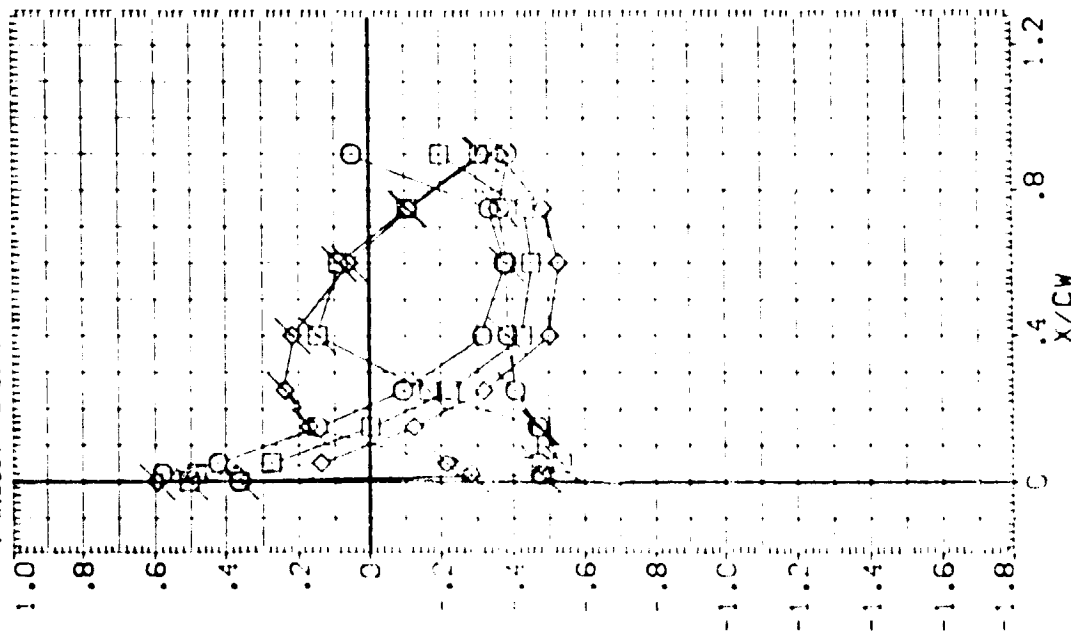
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPDBRK
 .000

MACH
 RUDDER

SYMBOL ALPHA3 Y/BV BETAS
 -0.220 .887 -3.960
 -4.200
 -1.760

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1033) OPEN ARC11-716 1A14 01112-S12Z5-AT10 UPPER WING
 (RB1133) FLAGGED ARC11-716 1A14 01112-S12Z5-AT10 LOWER WING



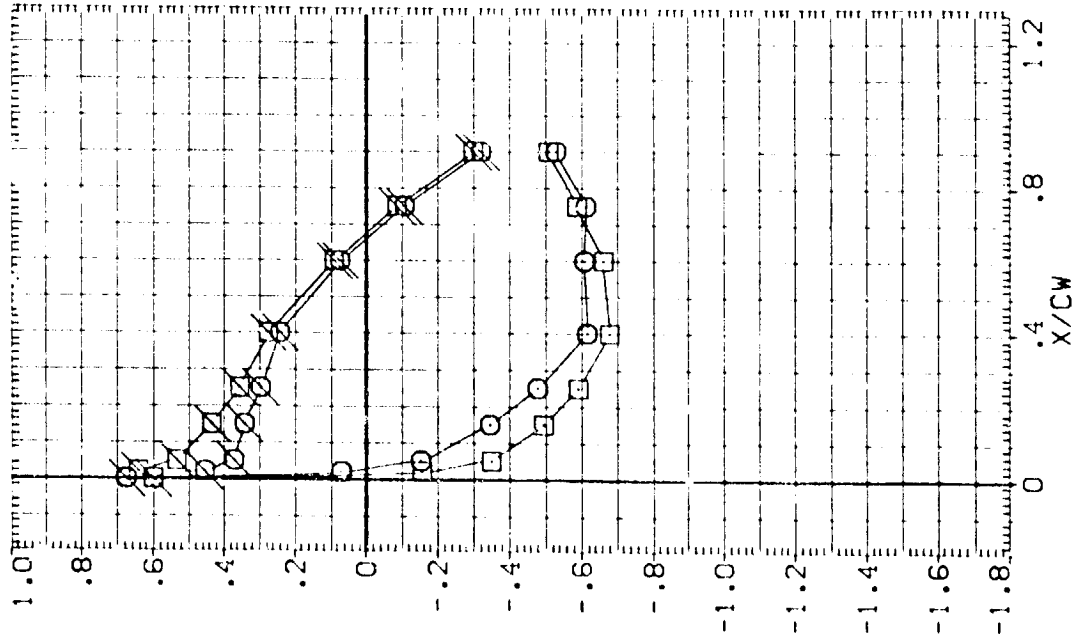
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPDBRK

MACH
 RUOVER

SYMBOL ALPHA0 Y/BV BETA0
 4.300 .887 -3.960
 7.810

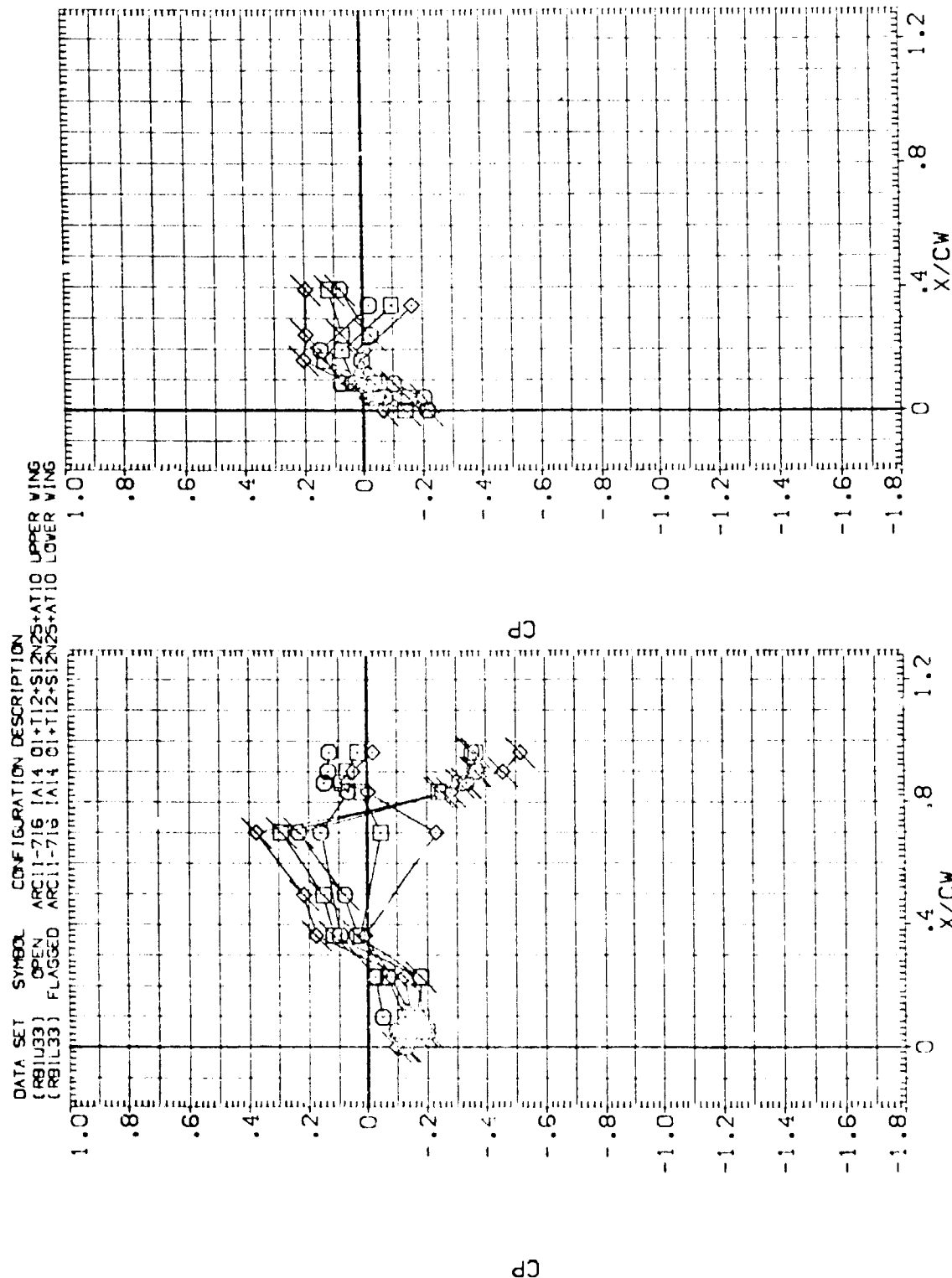
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 1A14 01+112-S12N25+AT10 UPPER WING
 (R81U33) FLAGGED ARC11-716 1A14 01+112-S12N25+AT10 LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL ALPHA0 Y/BV BETAI0
 -8.220 .599 -1.970
 -4.200 .364
 -7.760

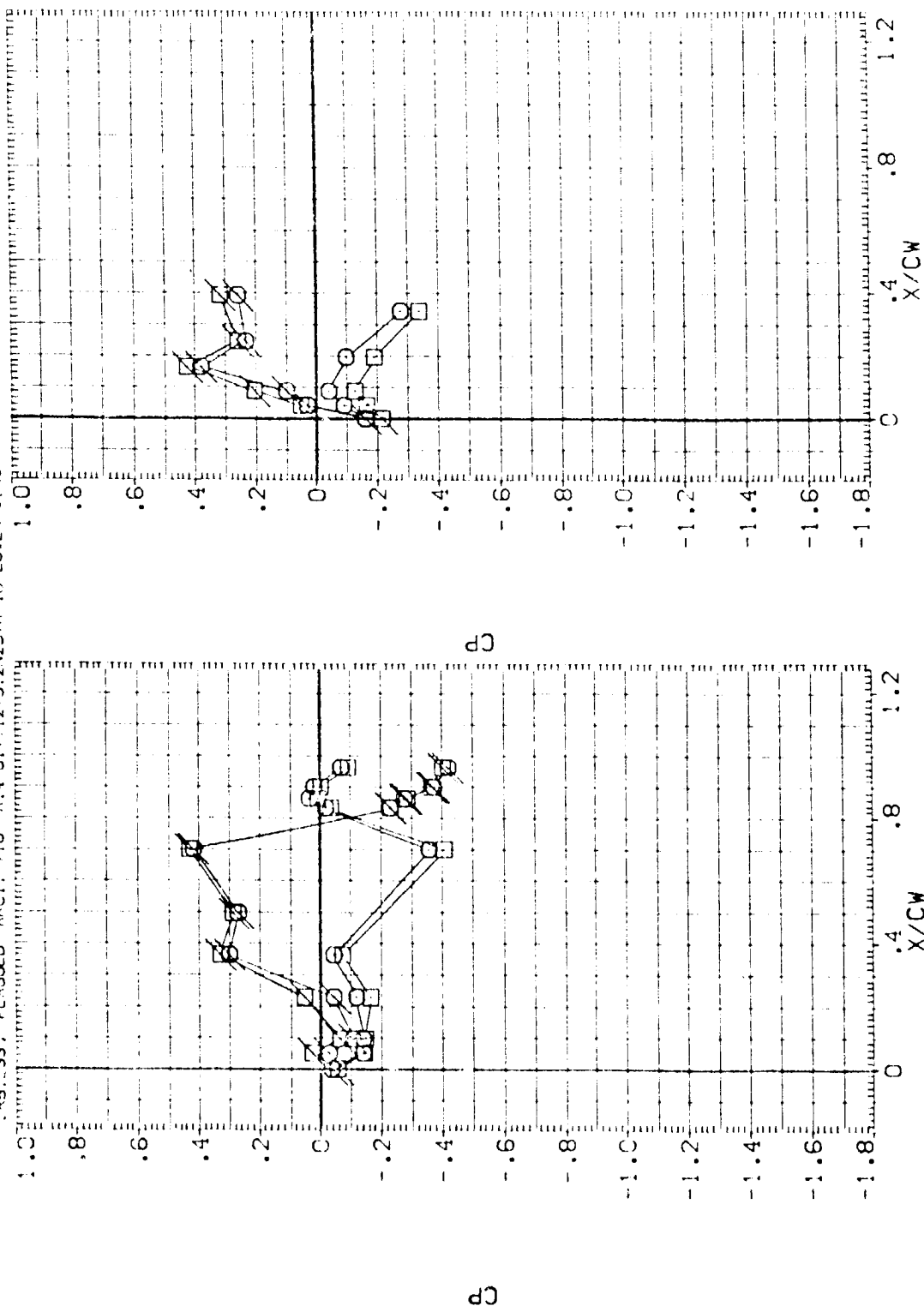


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOILER .000

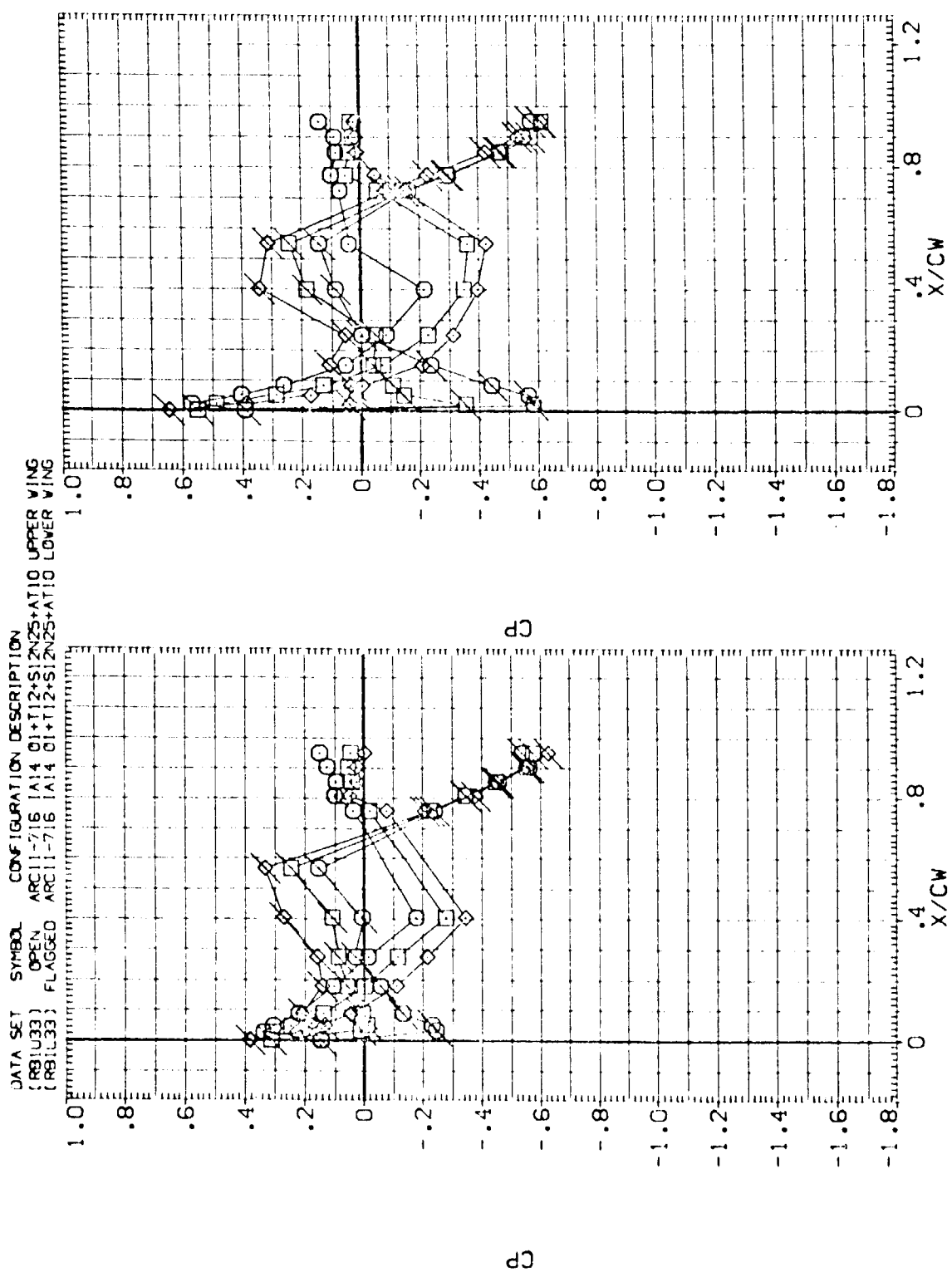
SYMBOL ALPHA0 Y/BV BETA0
 0 4.300 .299 -1.970
 1 7.910 .264

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (29:033) OPEN ARC11-716 1A14 01+112-S12N25+110 UPPER WING
 (29:033) FLAGGED ARC11-716 1A14 01+112-S12N25+110 LOWER WING



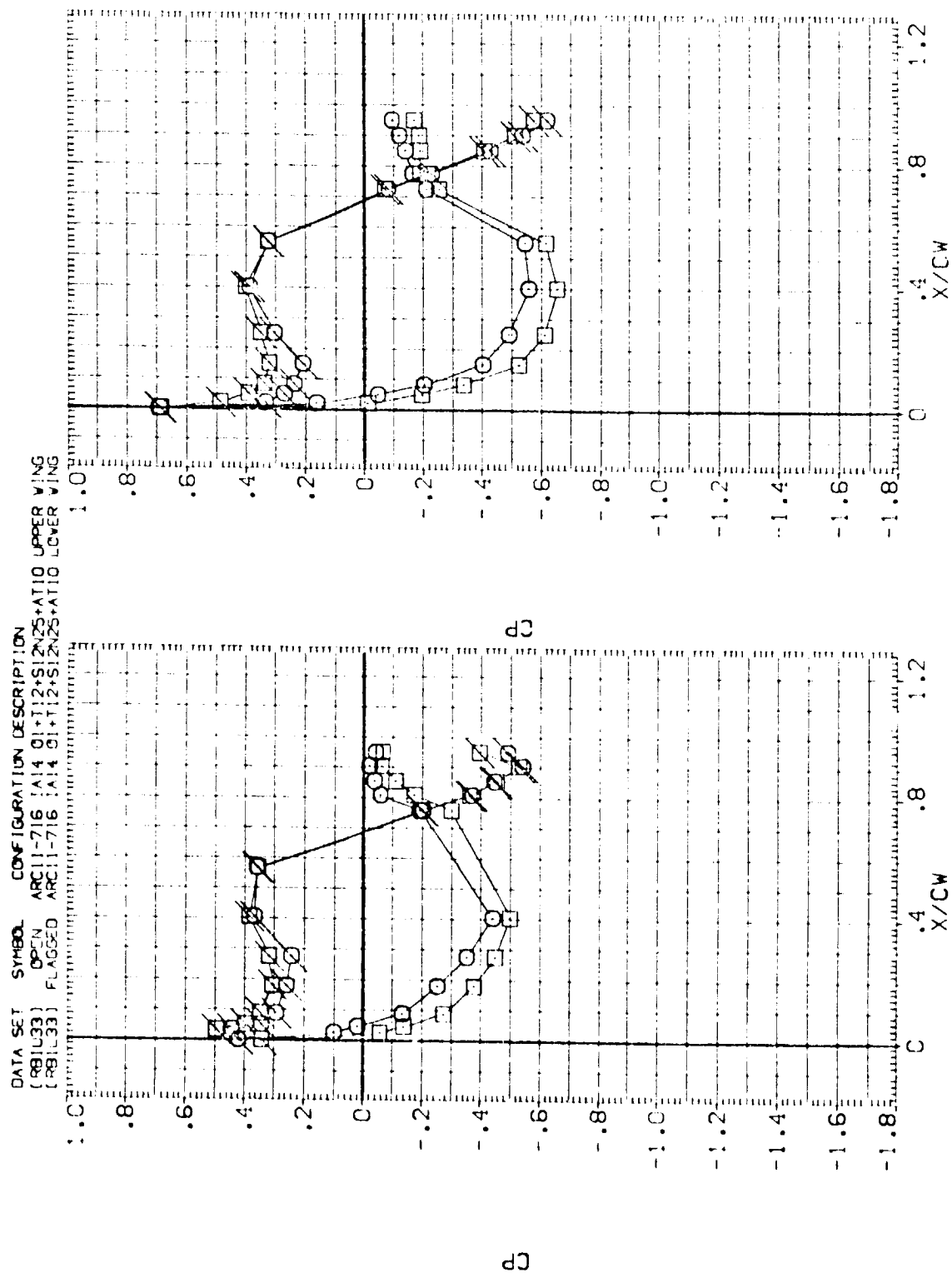
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.220	.427	-1.970	RUDDER	1.250 ELEVON
□	-4.200	.534			.000 SPOBRK
◇	-.760				.000



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA0	MACH	PARAMETRIC VALUES
○	4.300	.427	-1.970	RUDDER	1.250 ELEVON
□	7.910	.534			.000 SPOBRK
					.000



SYMBOL
 ○
 □
 ◇

ALPHA
 -8.220
 -4.200
 -1.760

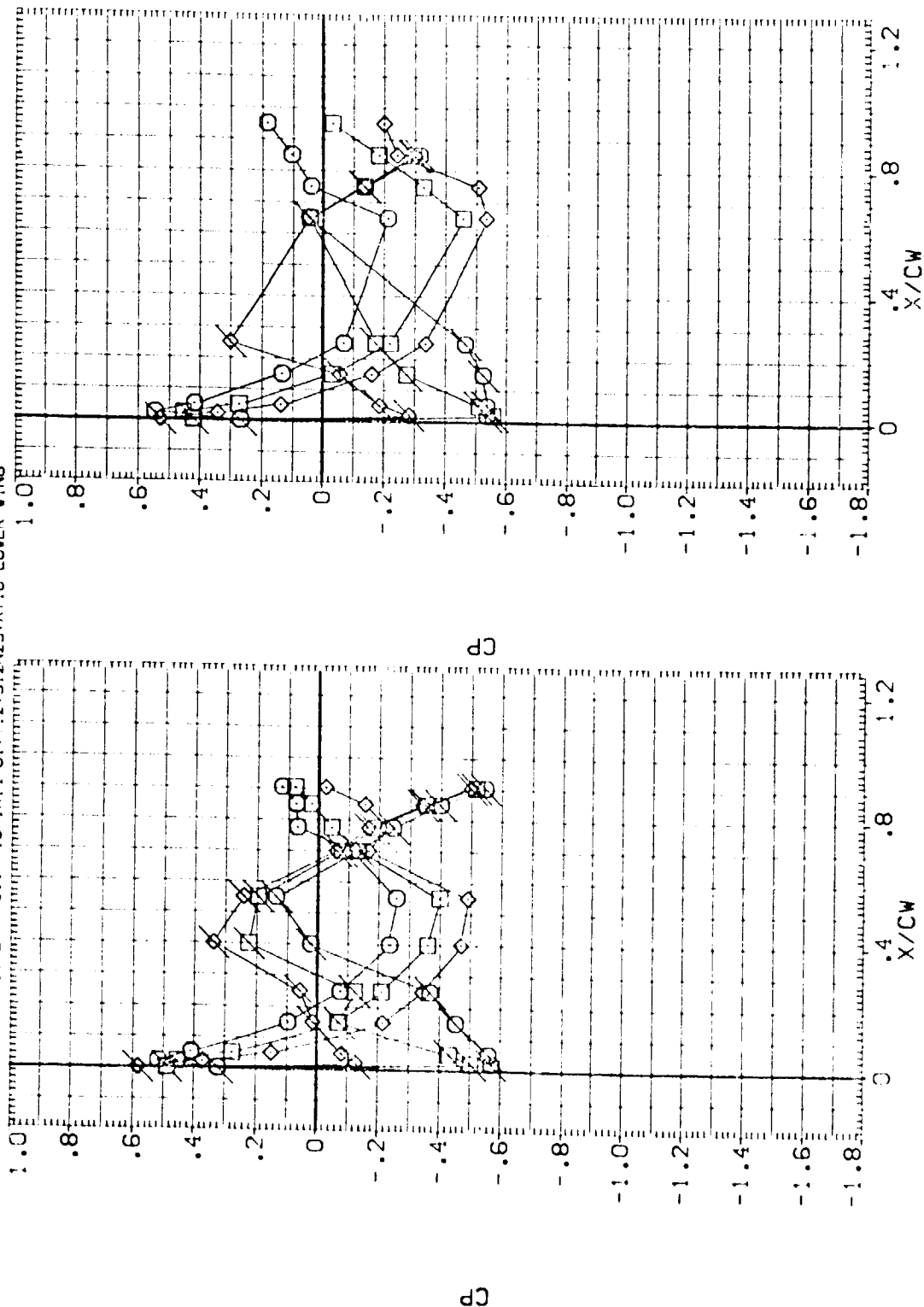
Y/BV
 .673
 .780

BETA
 -1.970

MACH
 RUDDER

PARAMETRIC VALUES
 1.250
 .000
 ELEVON
 SPOBRK
 .000
 .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 1A14 01+T12-S12N25+AT10 UPPER WING
 (R81L33) FLAGGED ARC11-716 1A14 01+T12-S12N25+AT10 LOWER WING



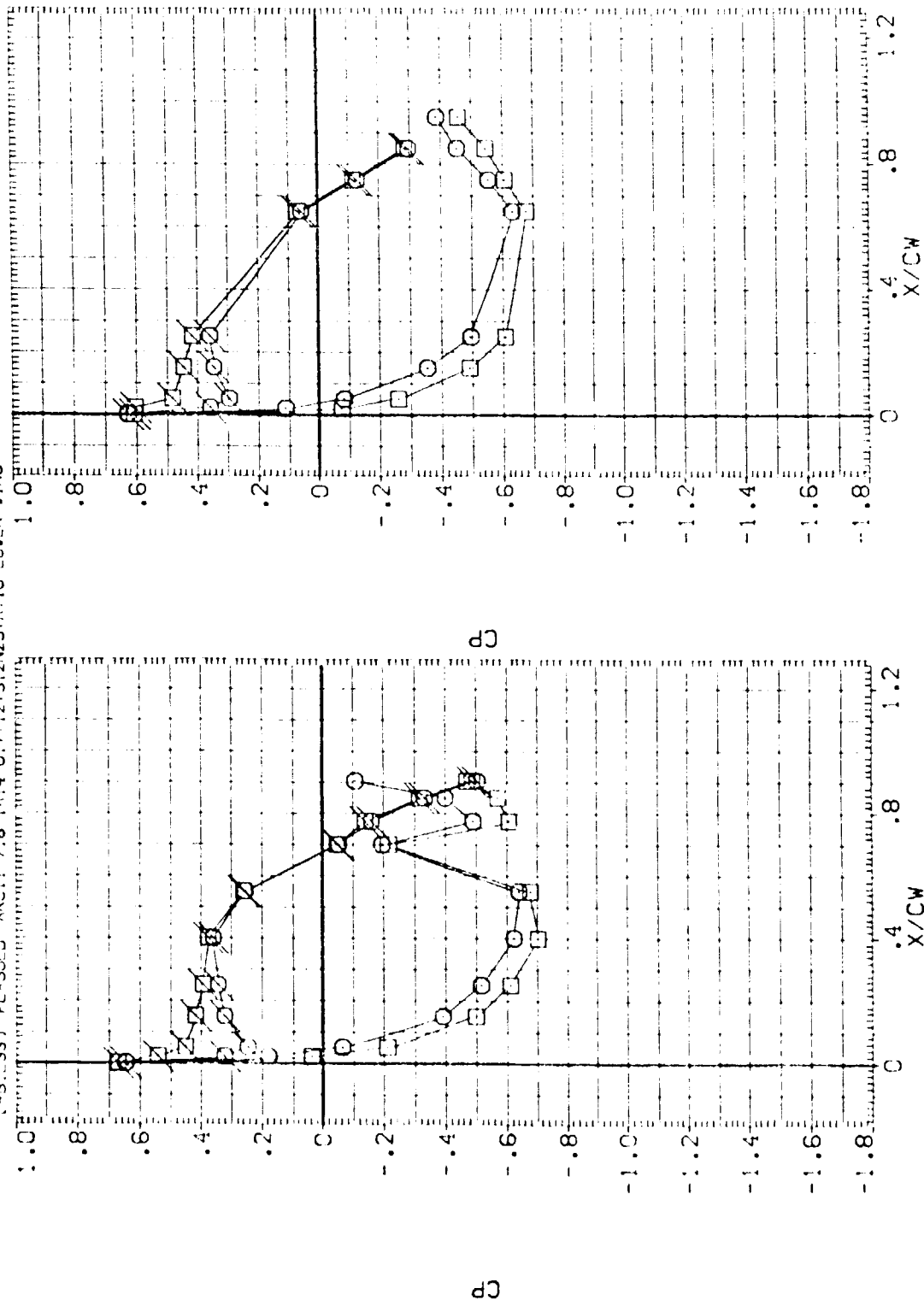
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES:
 1.250 ELEVON .000
 .000 SPOBRK

MACH
 RUDDER

SYMBOL ALPHA0 Y/BV BETA0
 1.300 .673 -1.970
 7.910 .780

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81133) OPEN ARC11-716 [A14 01+112+512+25+AT10] UPPER WING
 (931133) FLAGGED ARC11-716 [A14 01+112+512+25+AT10] LOWER WING

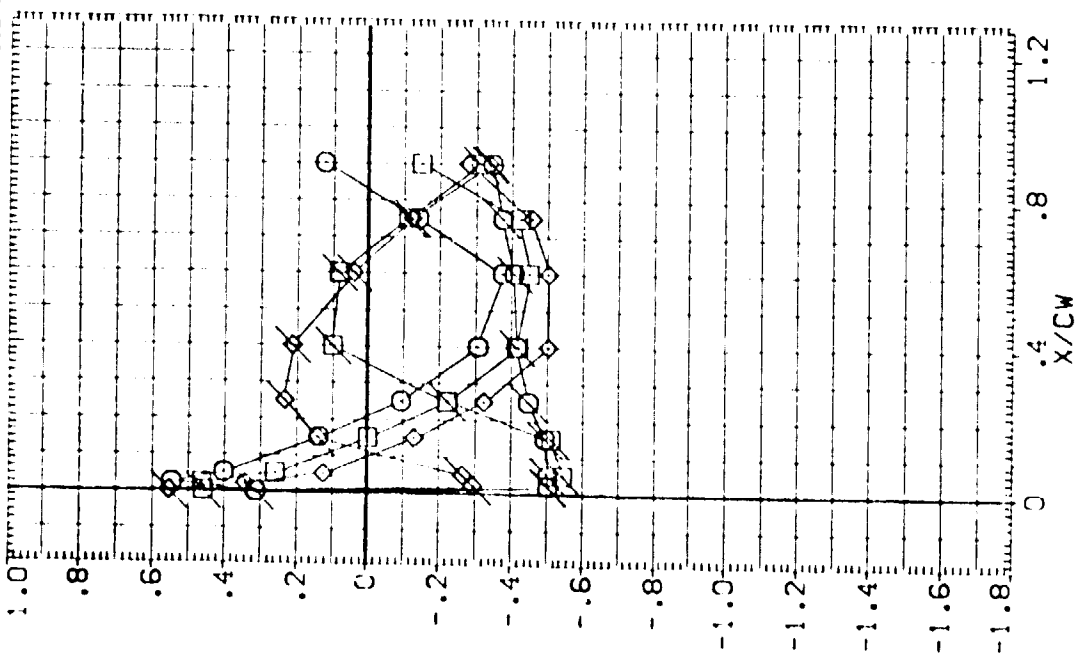


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA Y/BV BETA
 -8.220 .887 -1.970
 -4.200
 -1.760

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOBRK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81033) OPEN ARC11-716 IAI4 01+T12+S12+Z5+AT10 UPPER WING
 (R81033) FLASSED ARC11-716 IAI4 01+T12+S12+Z5+AT10 LOWER WING



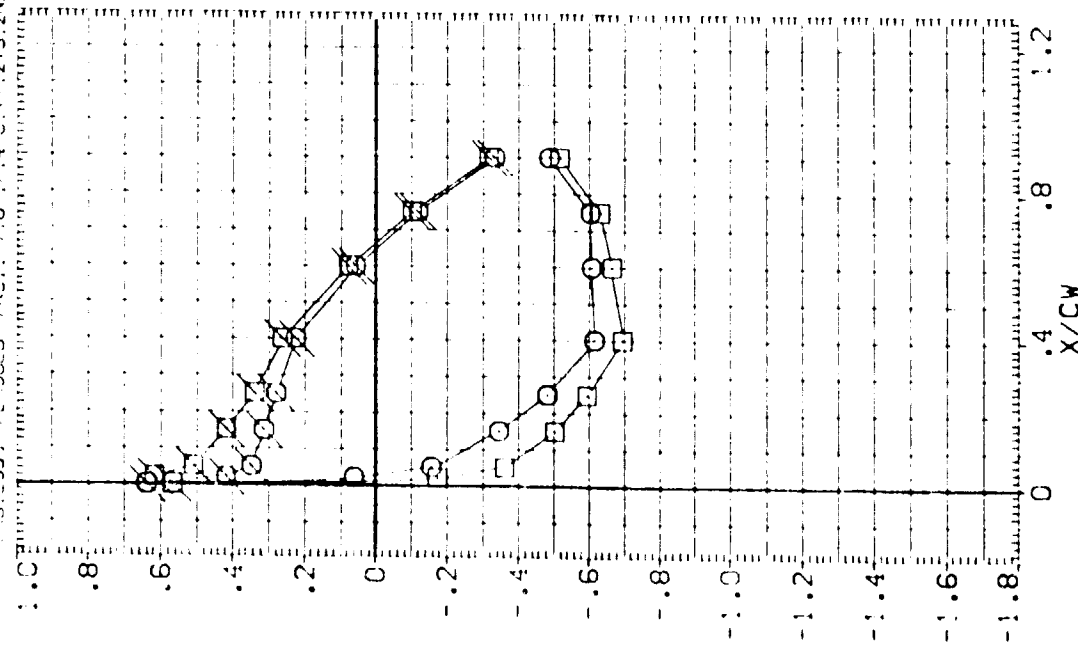
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON .00C
 .000 SPDBRK .00C

MACH
 RUDDER

ALPHA 4.300
 7.910
 Y/B 1.887
 BETA 1.970

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (P81U33) OPEN ARC11-716 1A14 01+112+512+25+110 UPPER WING
 (P81U33) FLAGGED ARC11-716 1A14 01+112+512+25+110 LOWER WING

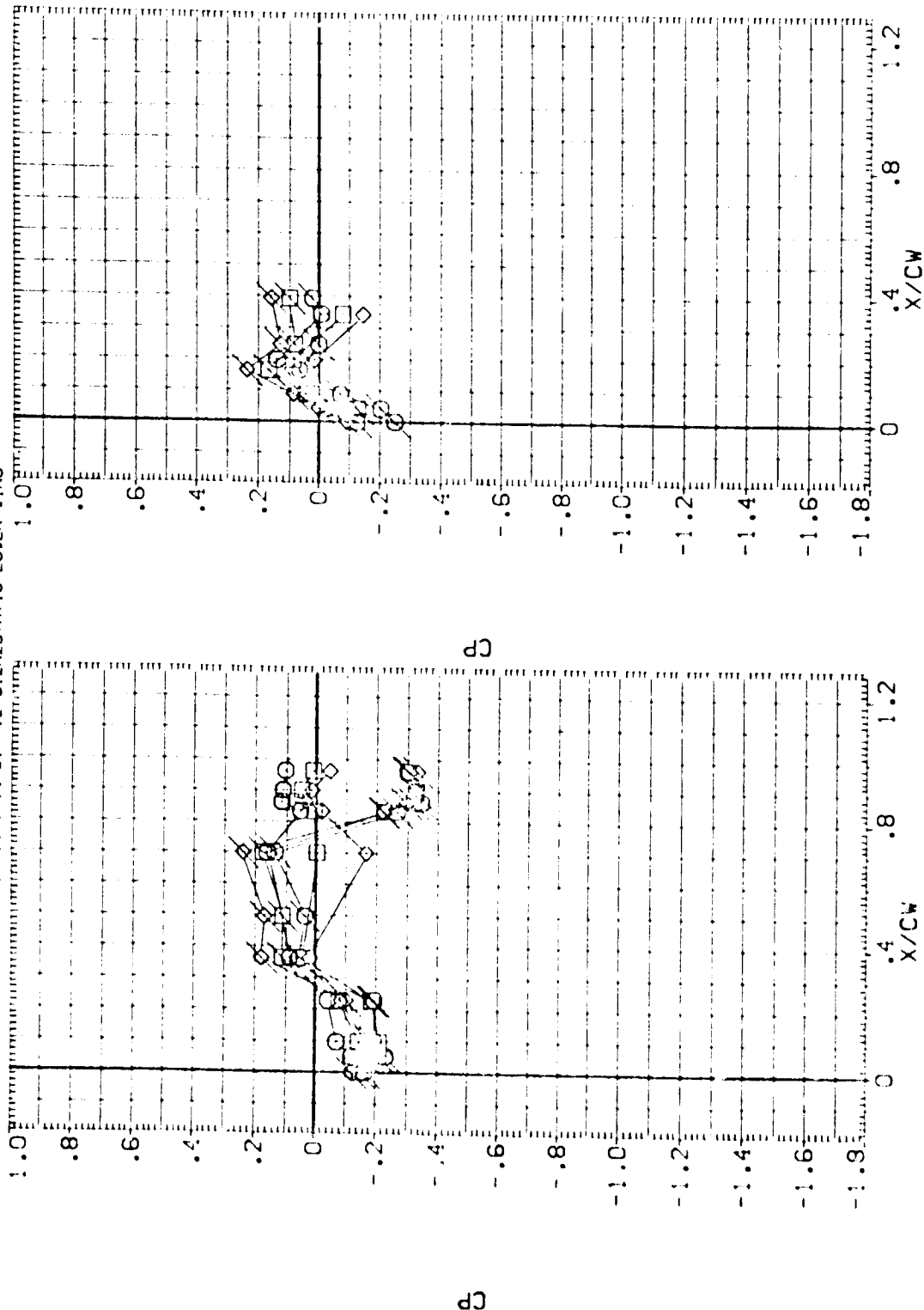


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOILER .000

SYMBOL ALPHA-0 Y/BV BETA-0
 O -8.220 .299 .020
 O -4.200 .364
 O -1.760

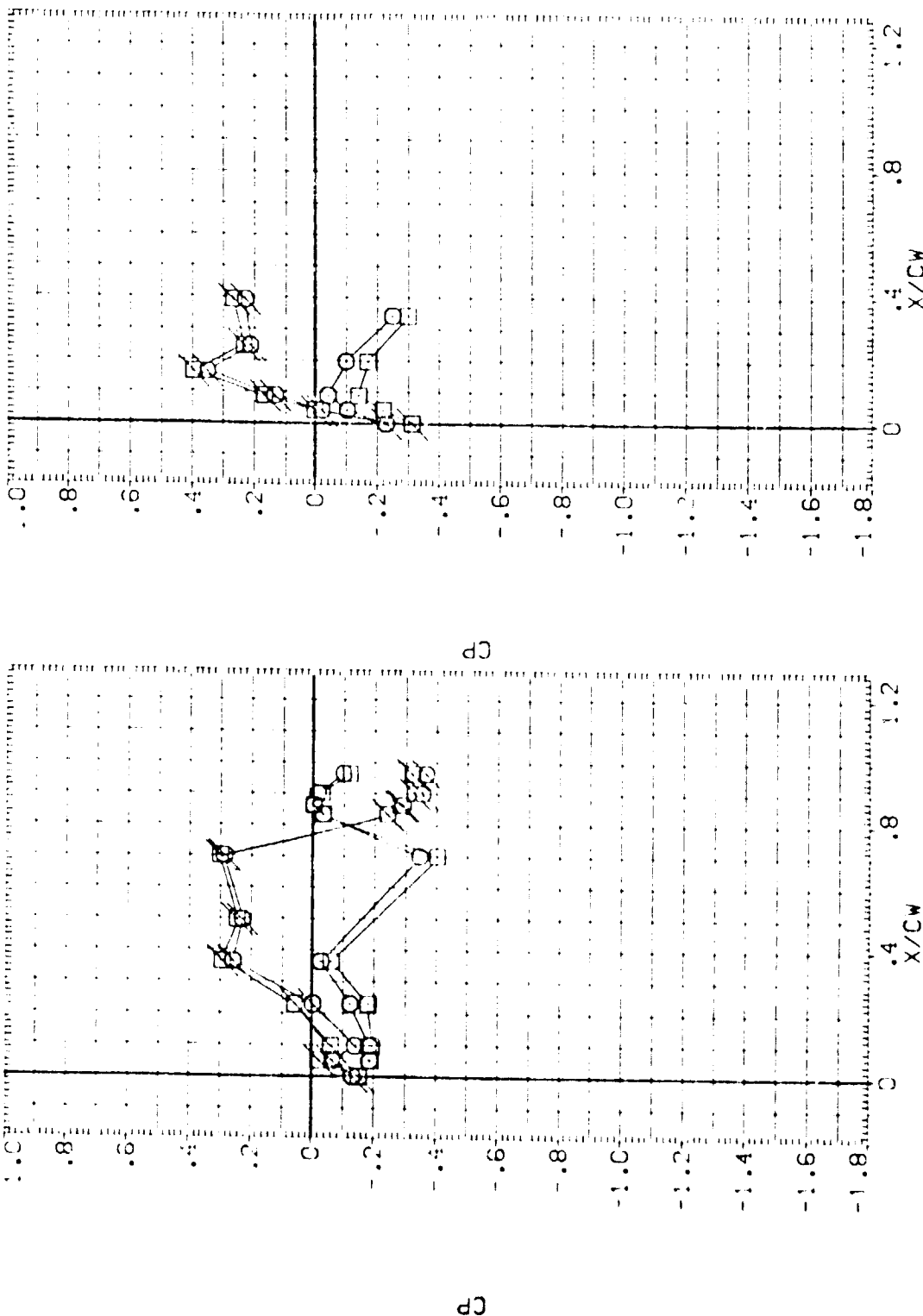
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 [A14 01+T12+S12+25+ATIO UPPER WING
 (R81U33) FLAGGED ARC11-716 [A14 01+T12+S12+25+ATIO LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

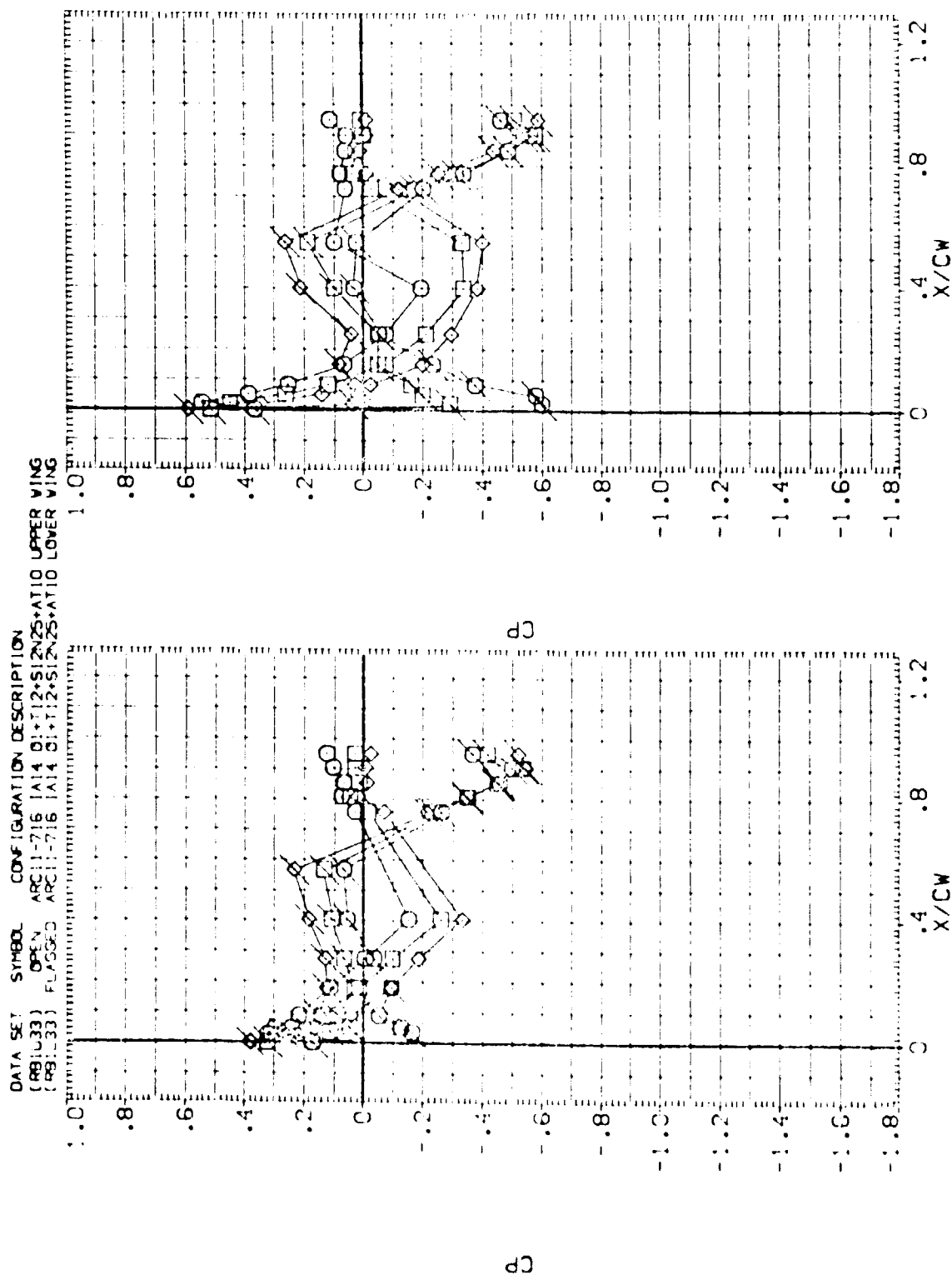
SYMBOL ALPHA Y/B BETA MACH RUDDER PARAMETRIC VALUES
 4.300 .298 .020 1.250 ELEVON .000
 7.910 .364 .000 SPEED .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R8) (U33) OPE ARC11-716 [A14 01+12+512+25+110] UPPER WING
 (R8) (U33) F. AGGED ARC11-716 [A14 01+12+512+25+110] LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/B	BETA	MACH	PARAMETRIC VALUES
○	-8.270	.427	.020	RUDDER	1.250 ELEVON .000
◇	-4.200	.534			.000 SPOBRK .000
◇	-1.760				

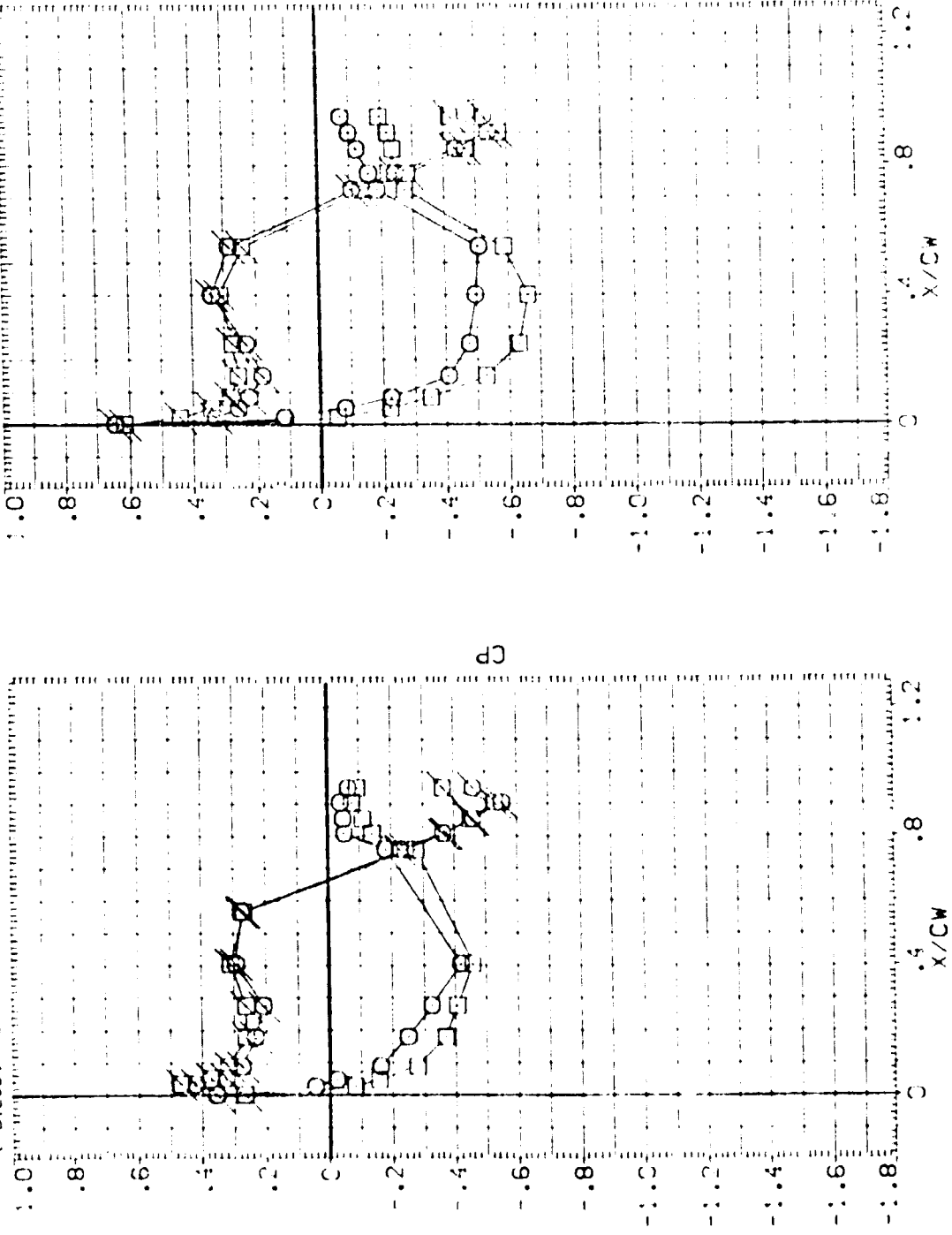


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVATION .000
 RUDDER .000 SPOILER .000

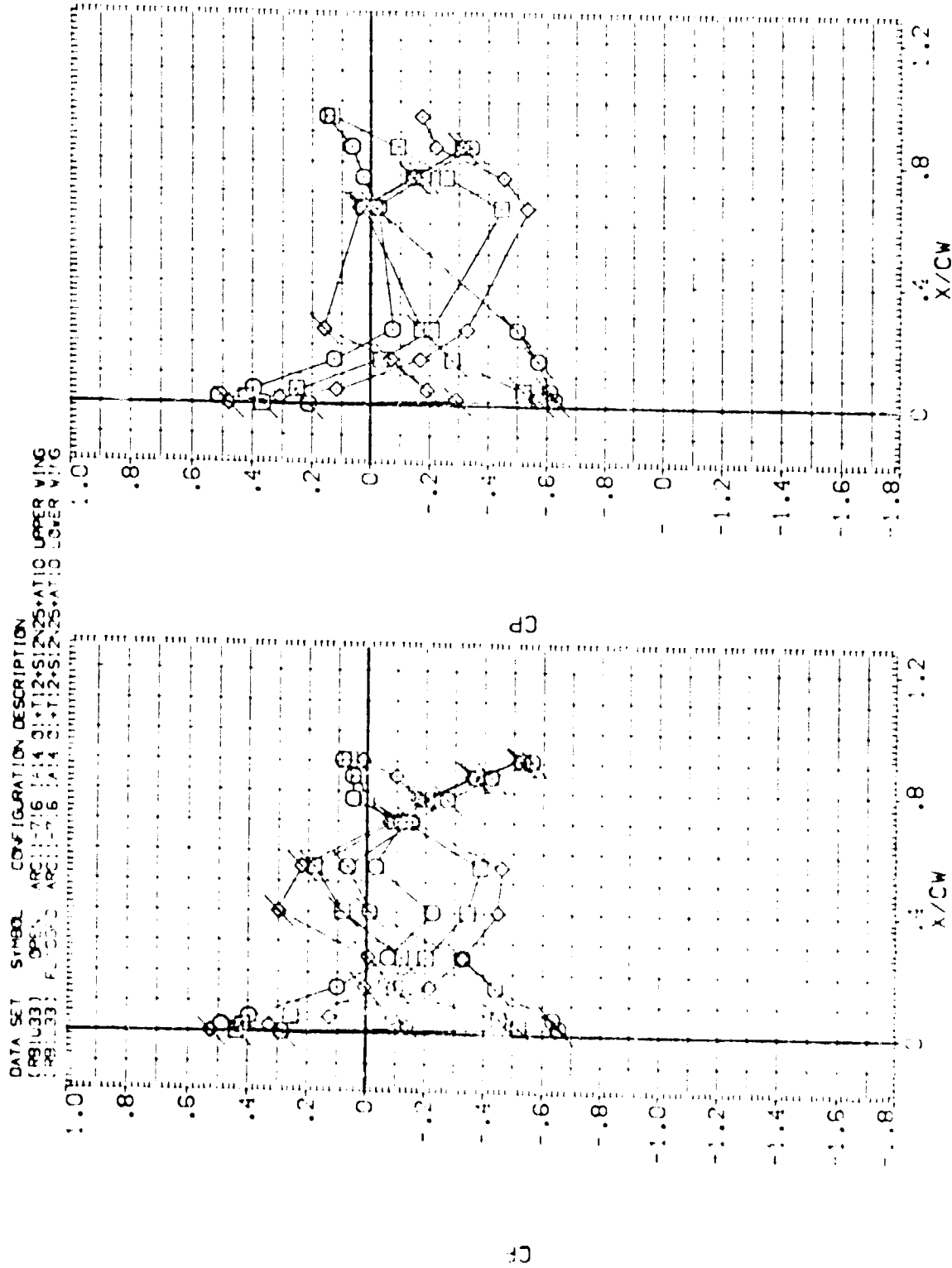
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81033) OPEN ARC11-716 [A] 4 0 1 2 5 2 7 5 2 1 0 UPPER WING
 (R81033) FLAGGED ARC11-716 [A] 4 0 1 2 5 2 7 5 2 1 0 LOWER WING

SYMBOL ALPHA-0 BETA-0
 0 4.000 0.427 0.020
 1 7.910 0.534



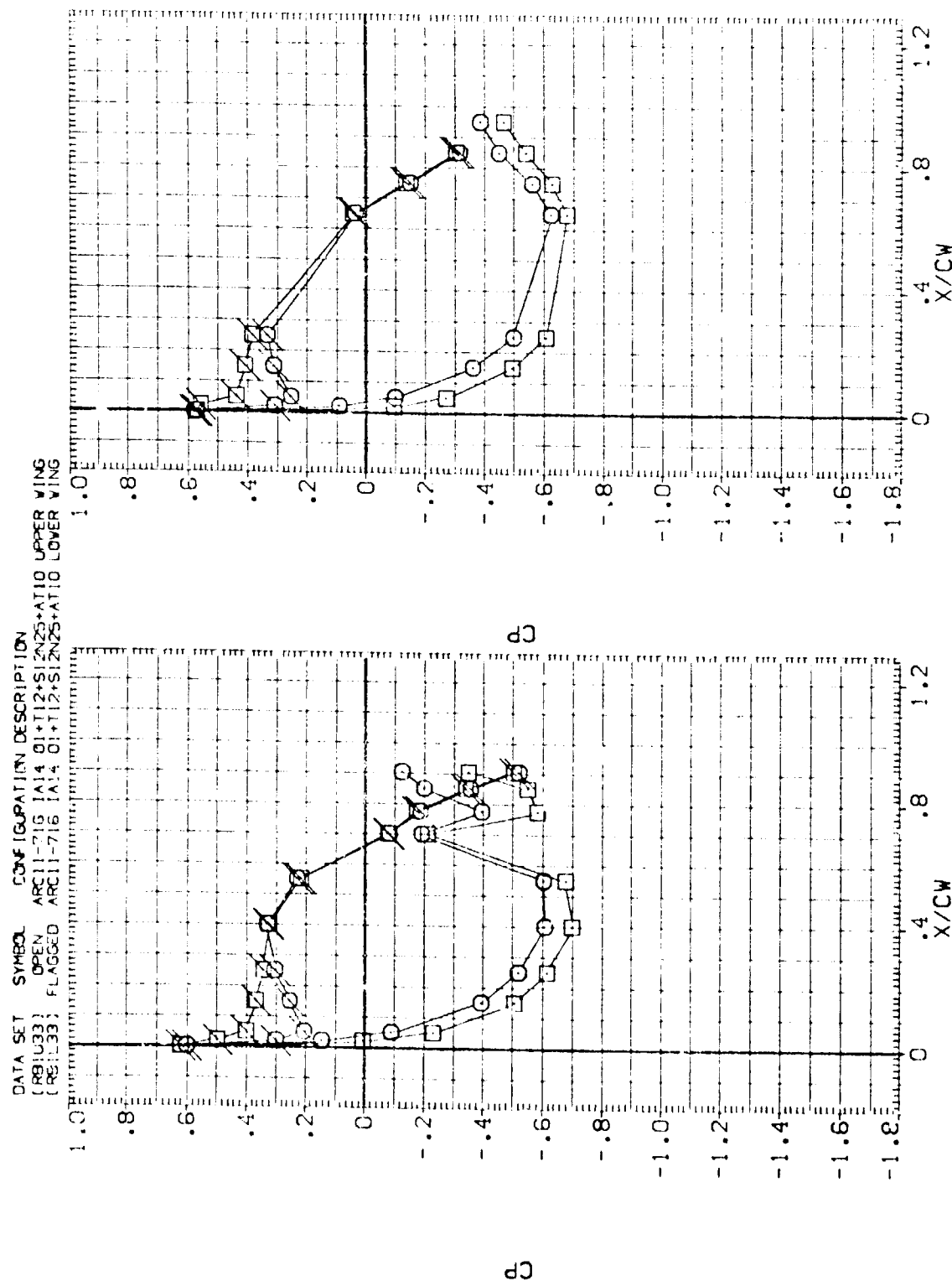
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	BETA	Y/B	SE TAD	MACH	PARAMETRIC VALUES
○	-8.220		.673	.000	RUDDER	1.250 ELEVON .000
◇	-4.200		.780			.000 SPOILER .000
◇	-7.60					



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/RV	BETA	MACH	PARAMETRIC VALUES
○	4.300	.673	.020	RUDDER	1.250 ELEVON
□	7.910	.780			.000 SPDRK



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

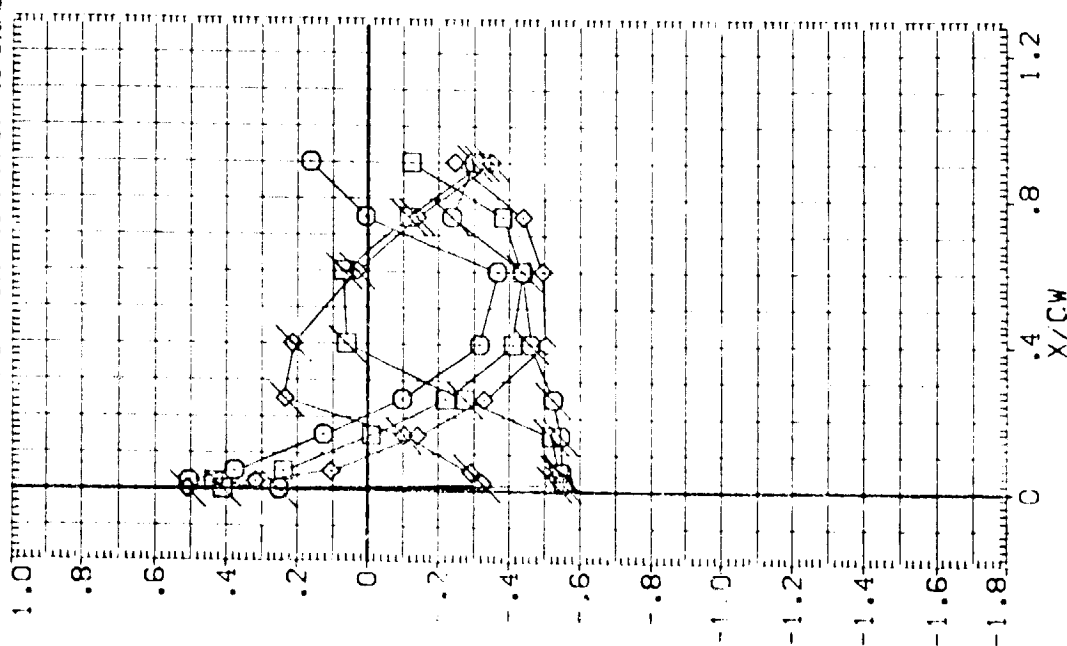
PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOILER .000

ALPHA
 -8.220
 -4.200
 -1.760

BETA
 .020

SYMBOL
 O
 □
 ◇

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 [A]4 01+112+512N25+AT10 UPPER VING
 (R81L33) FLAGGED ARC11-716 [A]4 01+112+512N25+AT10 LOWER VING



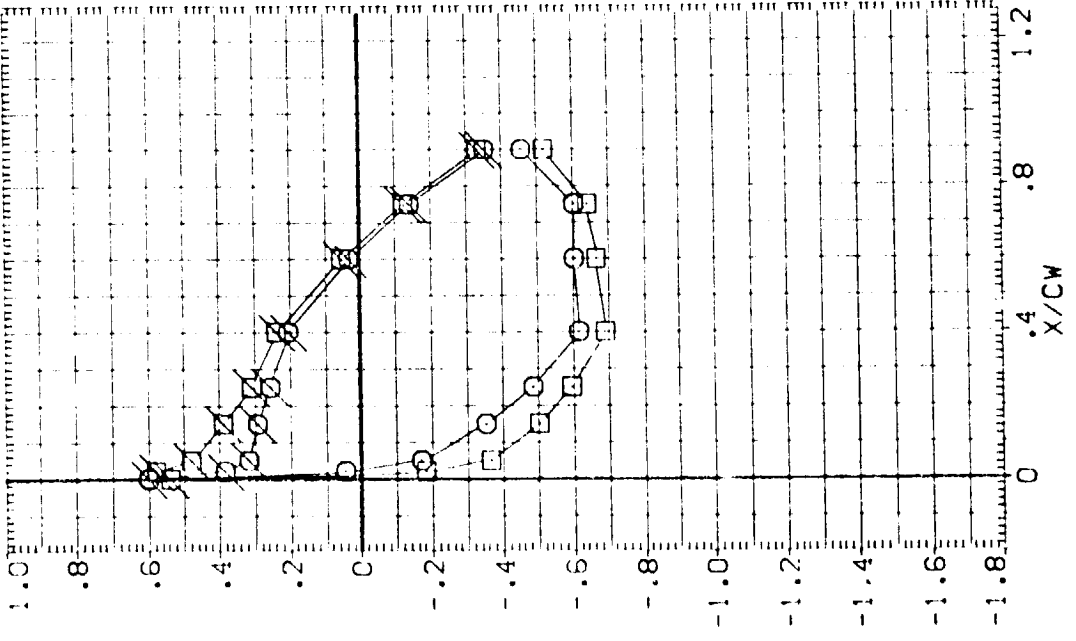
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 1.230 ELEVON .000
 .000 SPOILER .000

MACH
 RUDDER

SYMBOL ALPHA C Y/BV BETA
 4.300 .020
 7.910

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 1A14 01+T12+S12N25+AT10 UPPER WING
 (R81L33) FLAGGED ARC11-716 1A14 01+T12+S12N25+AT10 LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL
○ □ ◇

ALPHA
-8.220
-4.200
-7.760

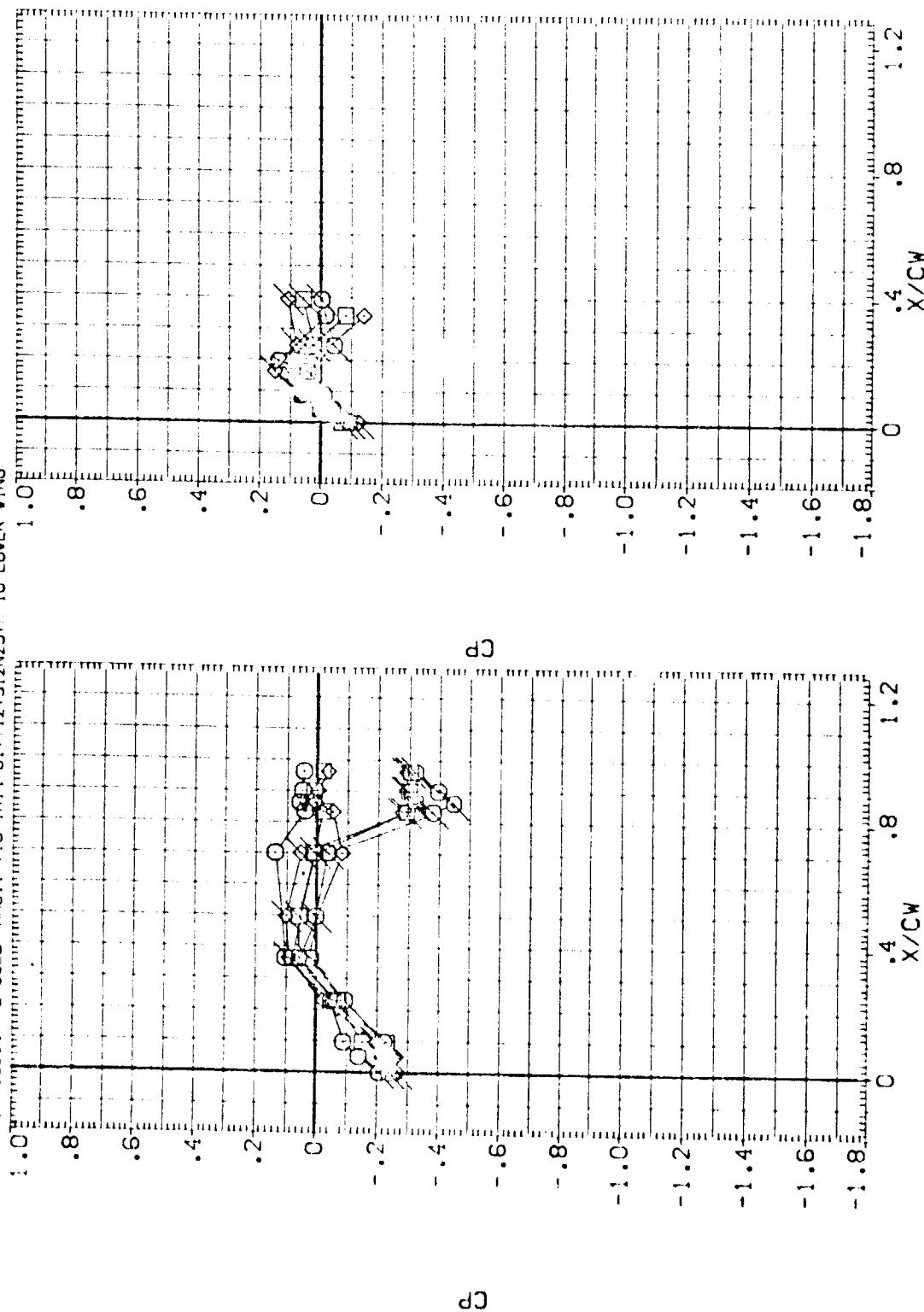
Y/BV
.299
.364

BETAC
4.080

PARAMETRIC VALUES
1.250 ELEVON
.000 SPDBRK

MACH
RUDDER

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RBIU33) OPEN ARC11-716 IAI4 01+112+512+25+AT10 UPPER WING
(RBIU33) FLAGGED ARC11-716 IAI4 01+112+512+25+T10 LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL
O
□

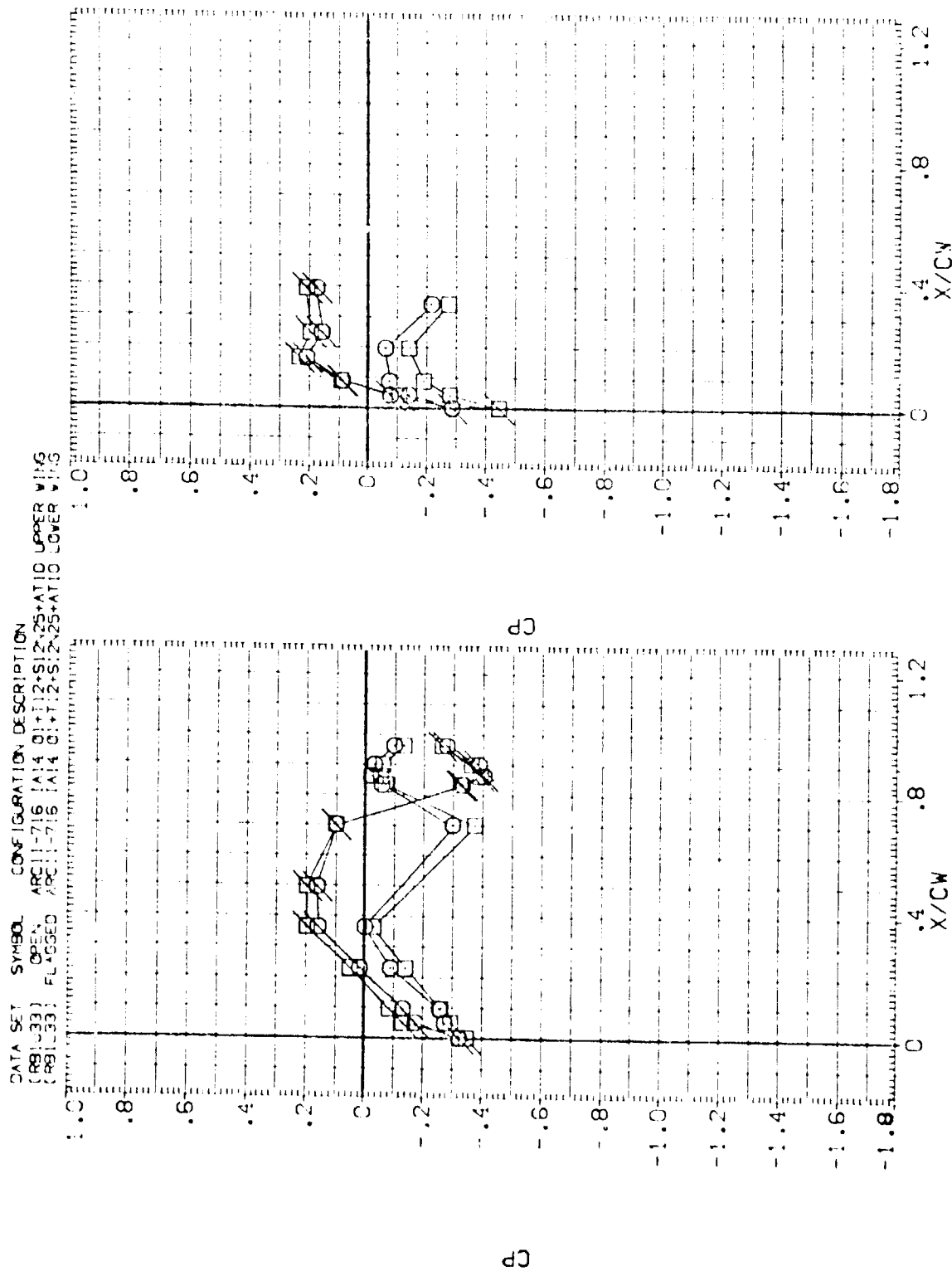
ALPHAC 4.300
7.910

Y/BV .299
.364

BETAB 4.080

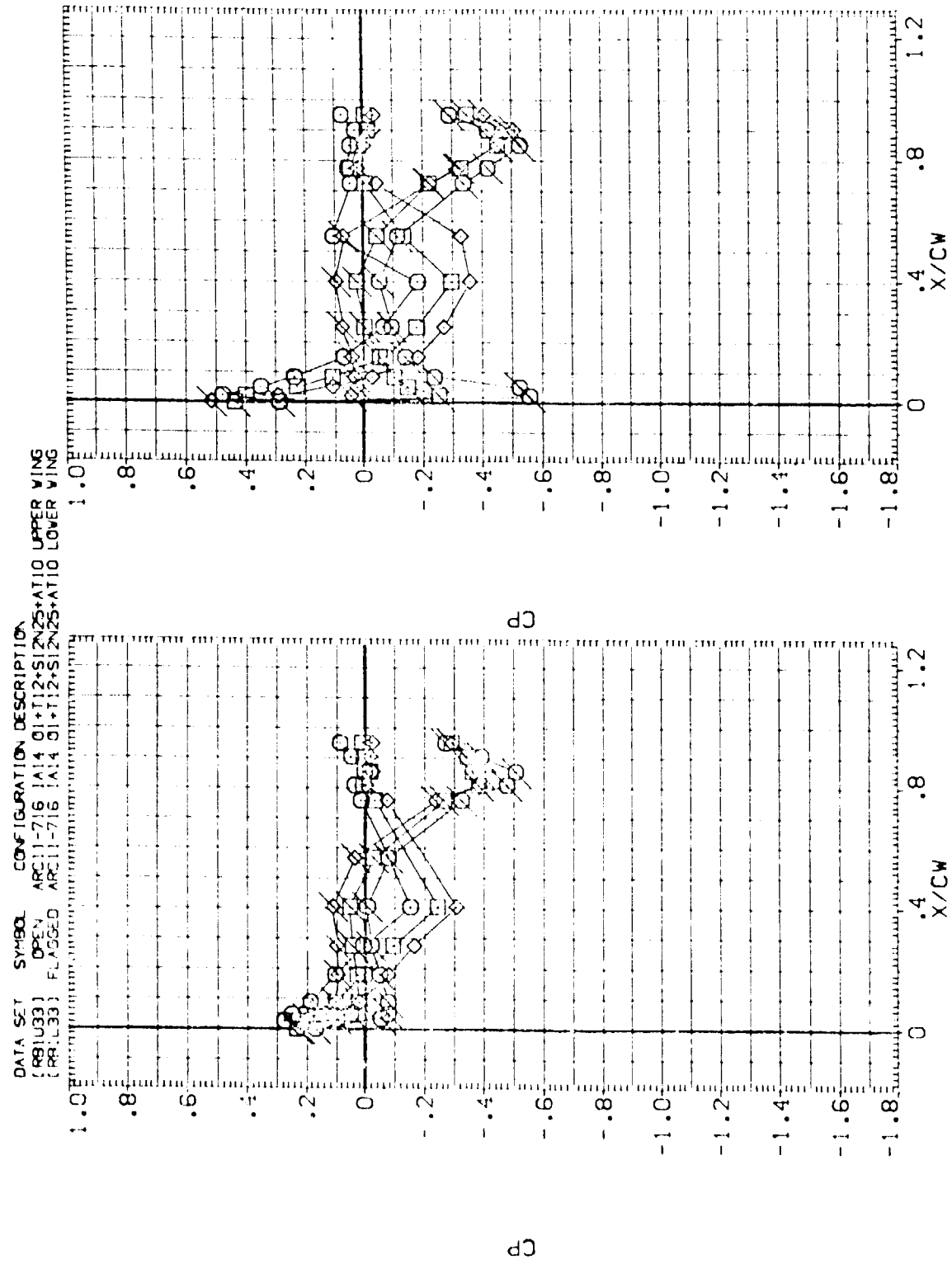
MACH .000
RUDDER .000

PARAMETRIC VALUES
ELEVON .000
SDBRX .000



PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPUERRK .000

SYMBOL ALPHA0 Y/BV BETA0
 O -8.220 .427 4.080
 I -4.200 .534
 D -.760

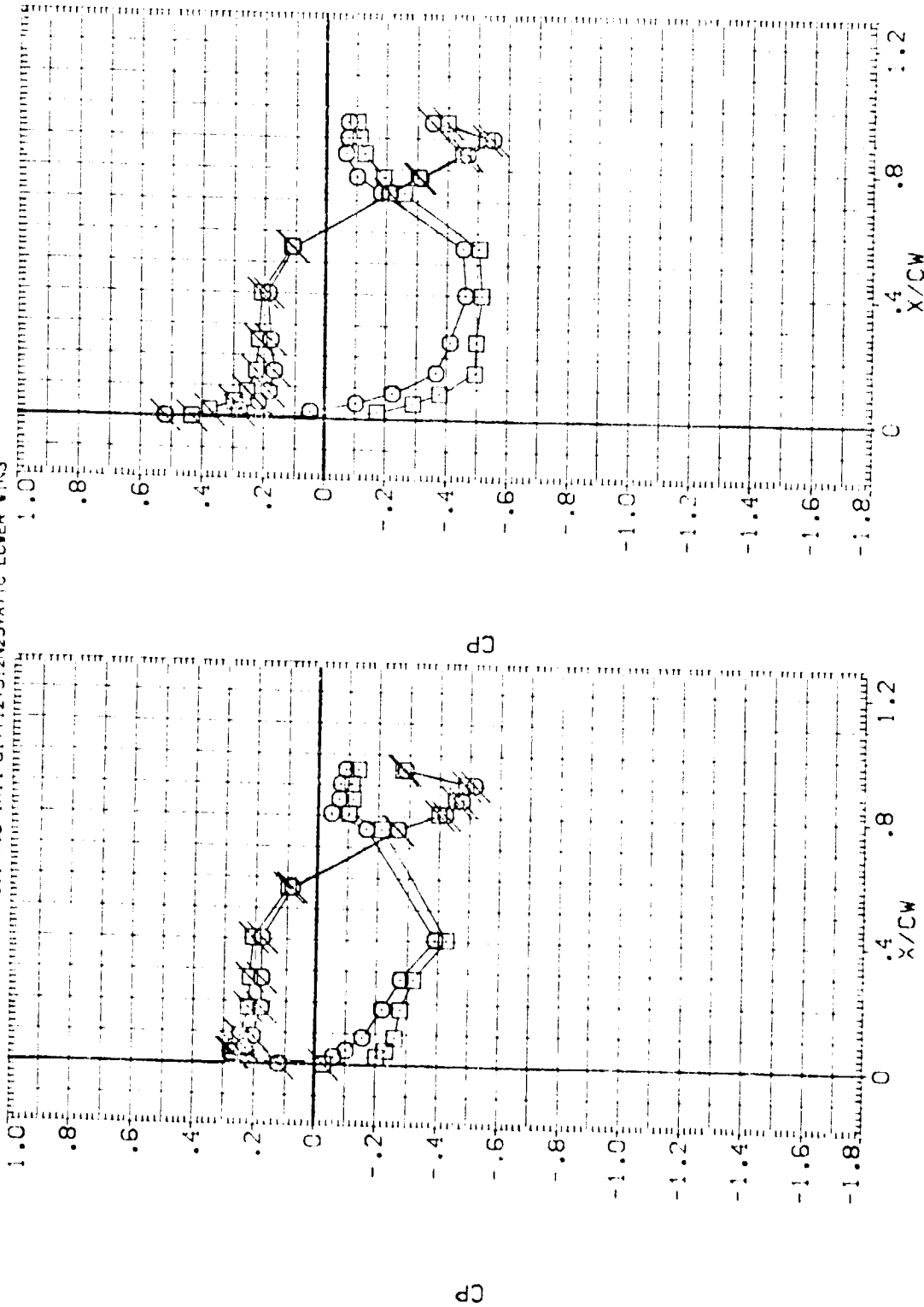


SYMBOL ALPHA BETA
 4.300 4.27 4.080
 7.910 .534

Y/BV
 .427
 .534

MACH RUDDER
 1.250
 .000
 ELEVON
 .000
 SPDRK
 .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R8)U33) OPEN ARC11-716 [A14 01+T12+S12+Z5+AT10 UPPER WING
 (R8)L33) FLAGGED ARC11-716 [A14 01+T12+S12+Z5+AT10 LOWER WING



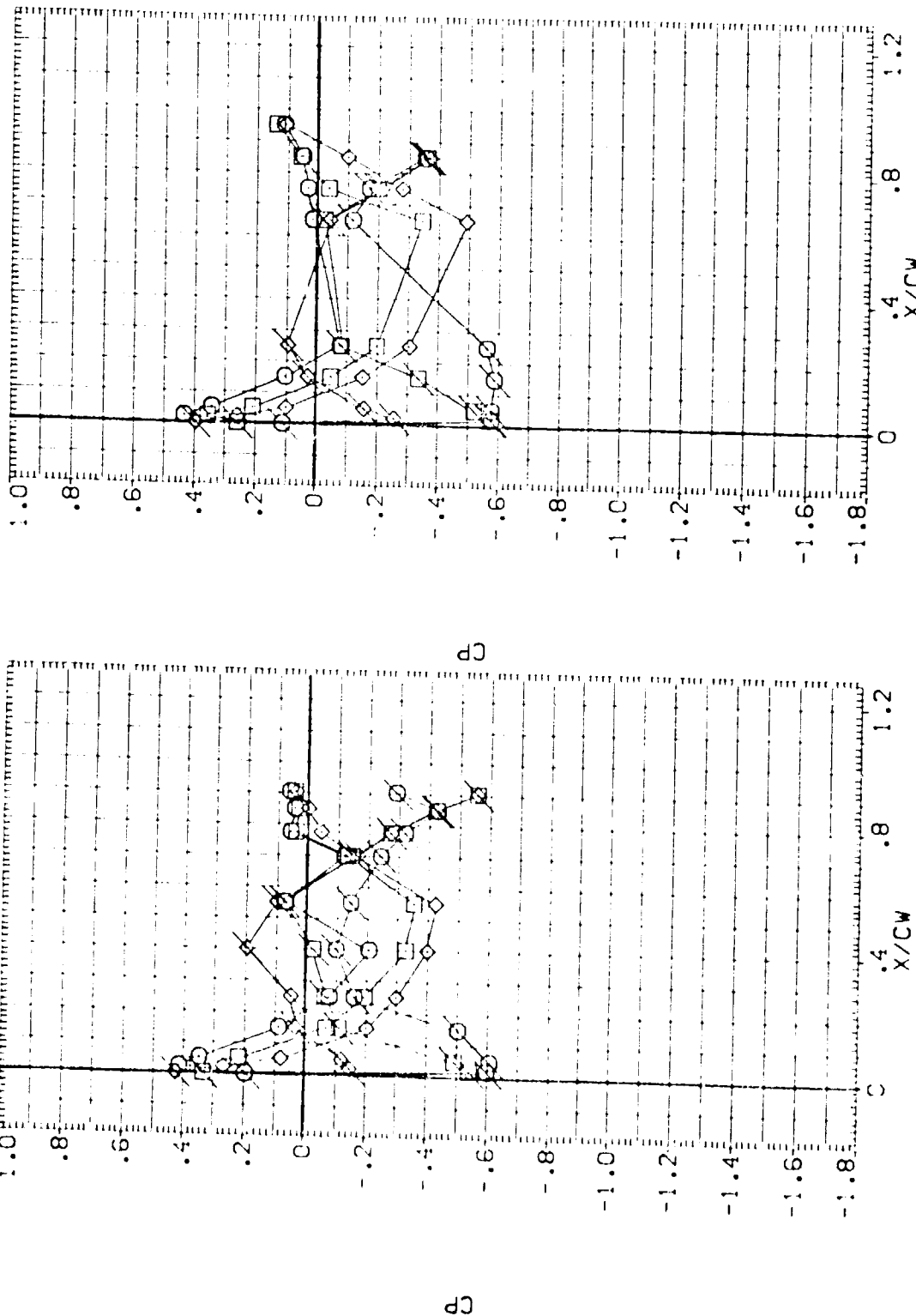
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA₀ Y/B₀ BETA₀

○ -8.220 .673 4.080
 □ -4.200 .780
 ◇ -7.760

PARAMETRIC VALUES
 MACH 1.250 ELEV₀ .000
 RUDDER .000 SPOBR₀ .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R8:U33) OPEN ARC11-716 [A:4 0]12+SI2N25+AT10 UPPER WING
 (R8:L33) FLAGGED ARC11-716 [A:4 0]12+SI2N25+AT10 LOWER WING



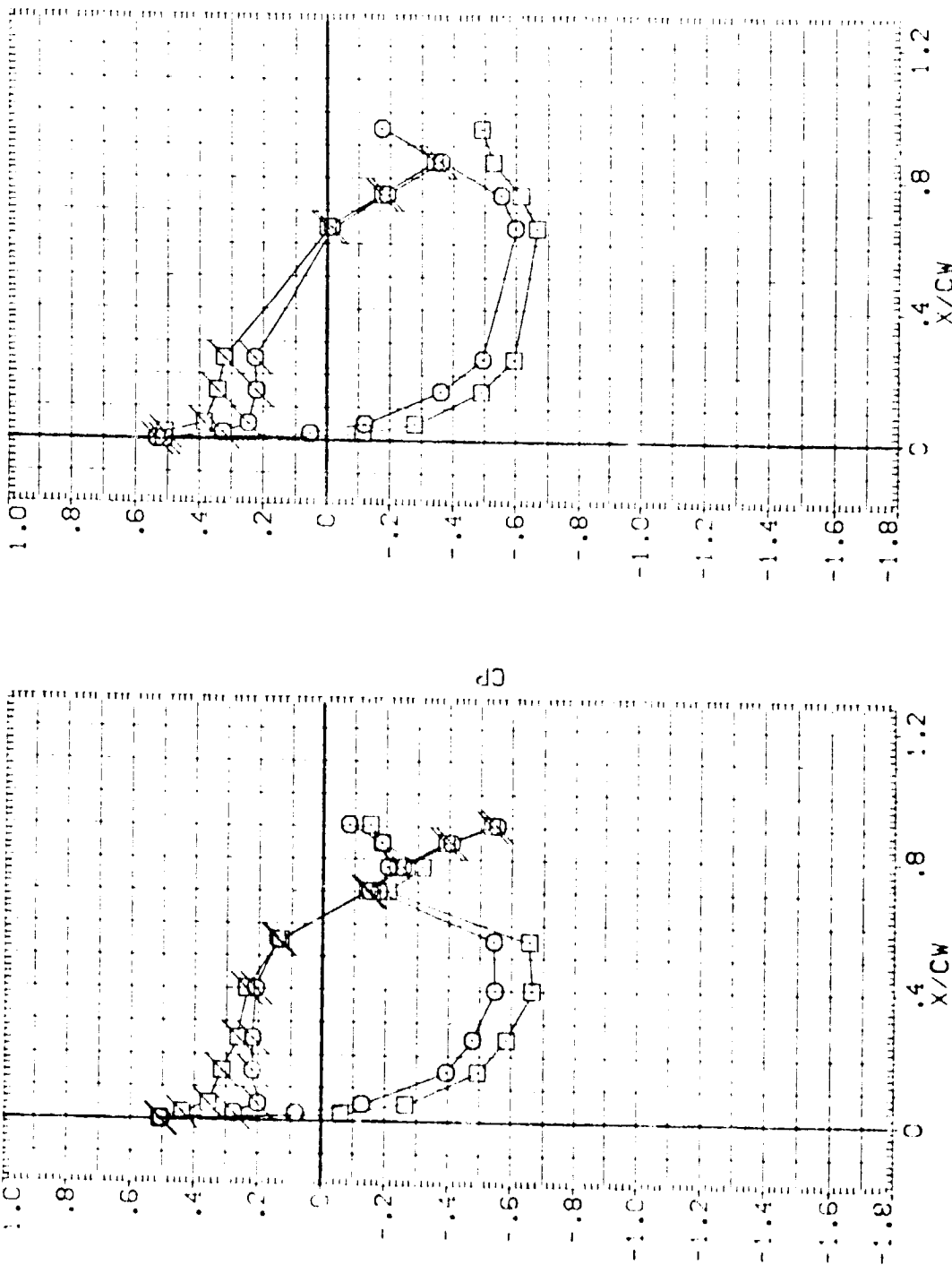
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA0 Y/BV SETAC
 O 4.300 .673 4.080
 □ 7.910 .780

MACH RUCOR
 PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPDBRY
 .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(R81-33) OPEN ARC11-716 [A14 01+712+512+25+AT10] UPPER WING
 (R81-33) FLAGGED ARC11-716 [A14 01+712+512+25+AT10] LOWER WING



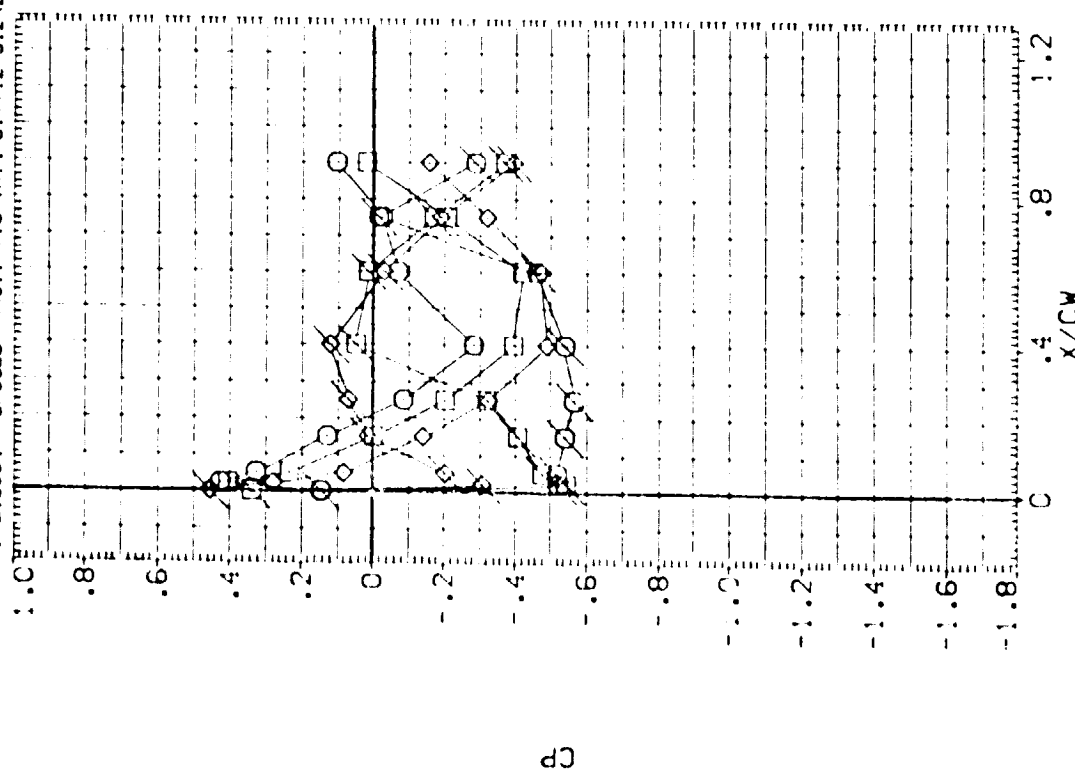
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA
O -8.220
I -4.200
Q -7.60

Y/BV .887
BETA/D 4.080

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPOBRK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RBLU33) OPEN ARC11-7116 1A14 01+112+512N25+AT10 UPPER WING
(RBLU33) FLAGGED ARC11-7116 1A14 01+112+512N25+AT10 LOWER WING

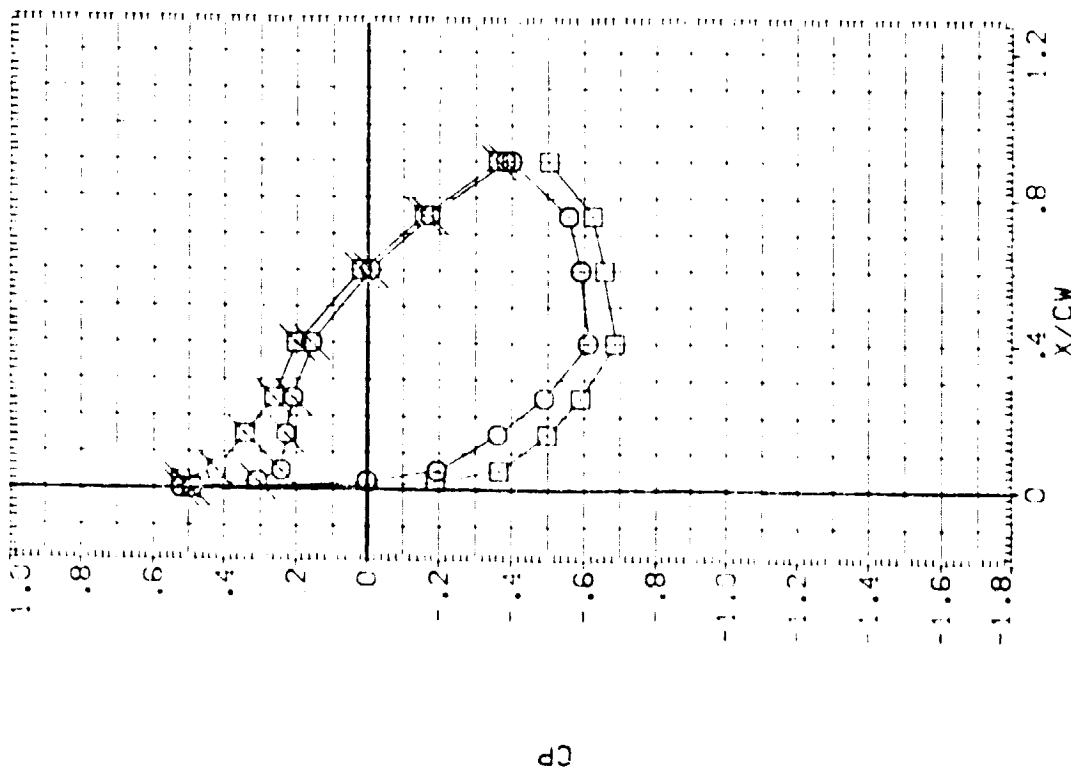


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALP AC Y/B_W BETAD
 0 4.300 .887 4.080
 1 7.910

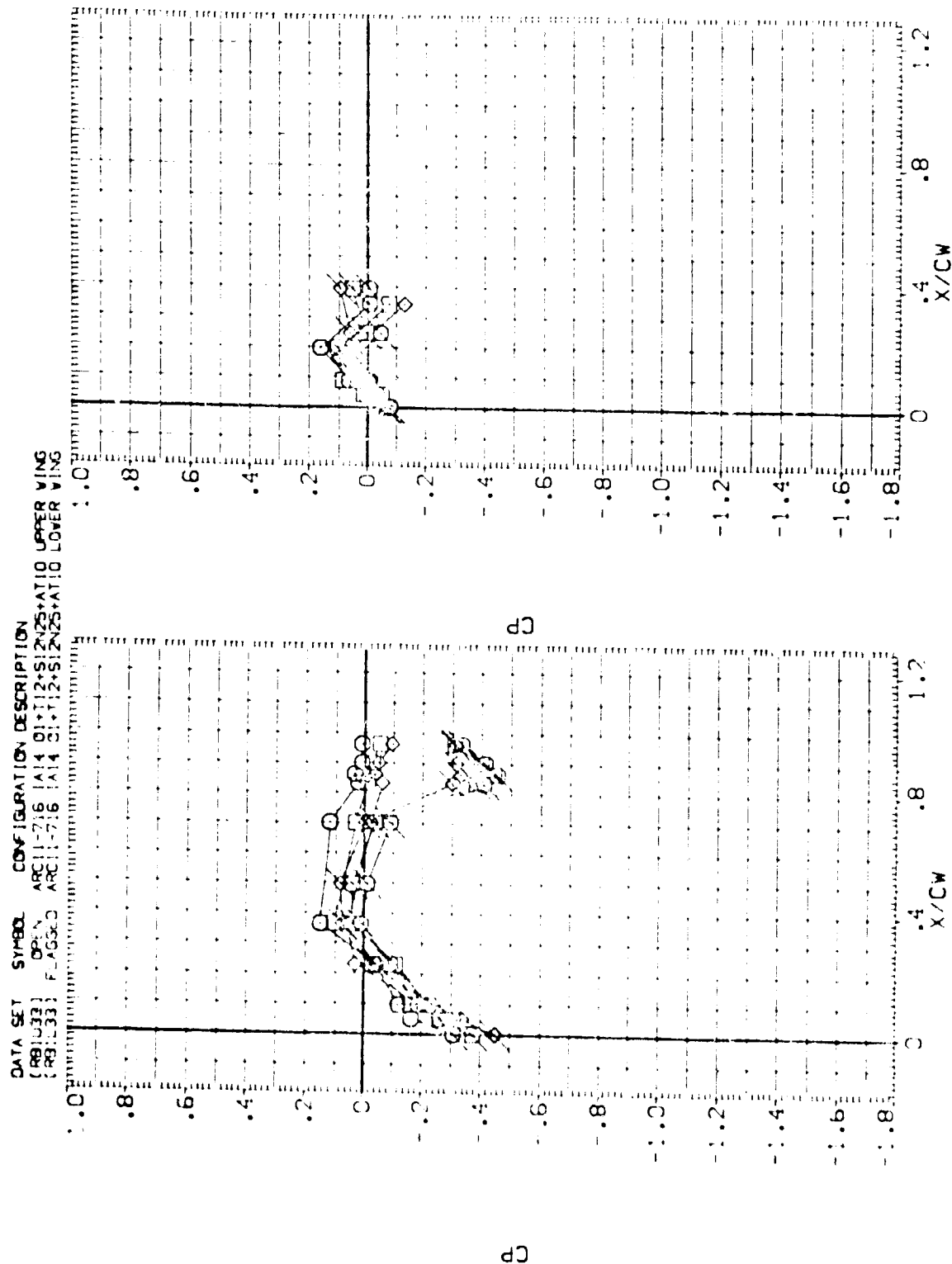
PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPC3RK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R91033) OPEN ARC11-215 1A14 01+112+S12+25+AT10 UPPER WING
 (R91033) FLASSED ARC11-215 1A14 01+112+S12+25+AT10 LOWER WING



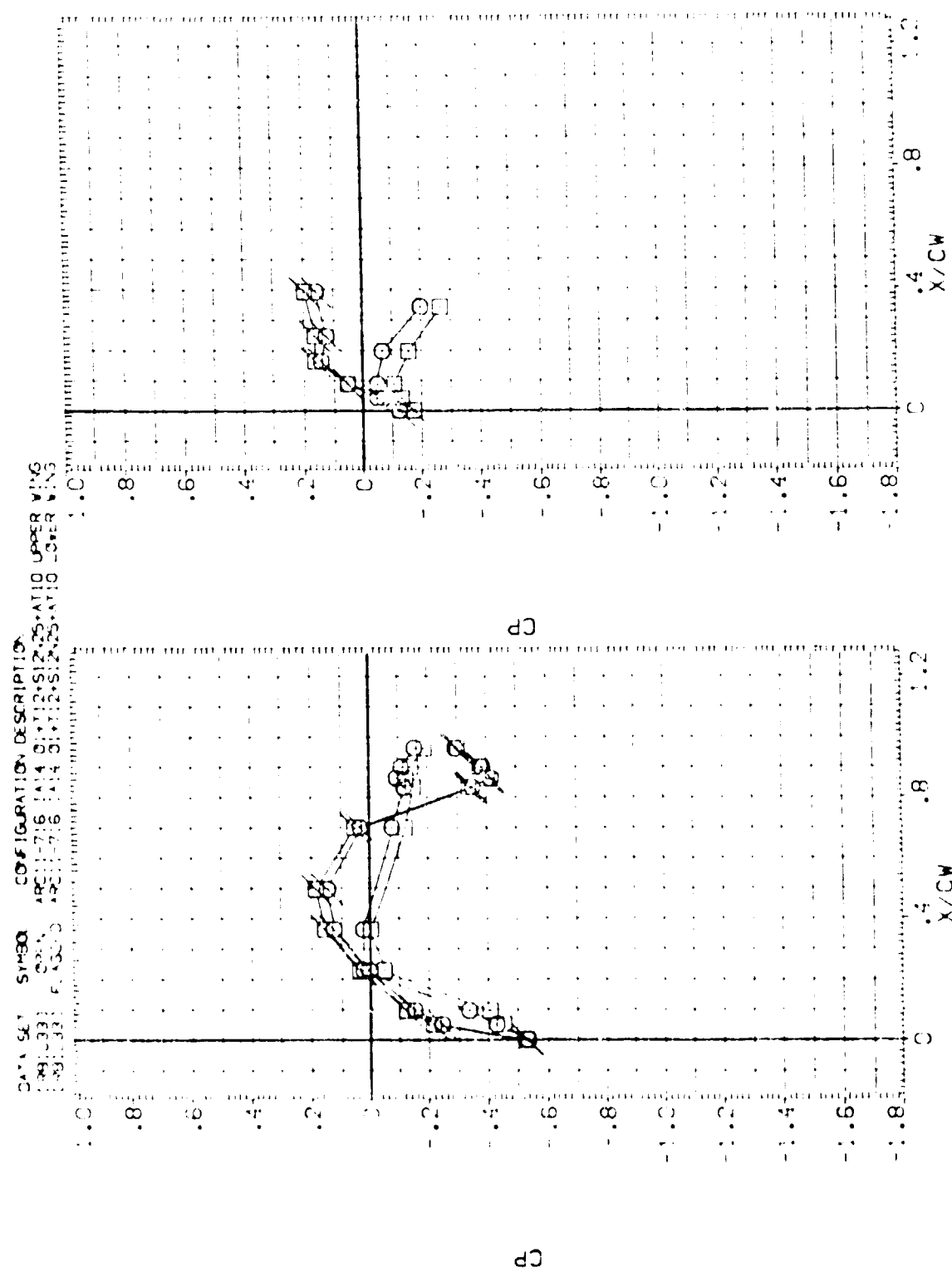
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-0.220	.293	8.120	RUDDER	1.250 ELEVON .300
◇	-4.200	.361			.000 SPEED
◇	-760				



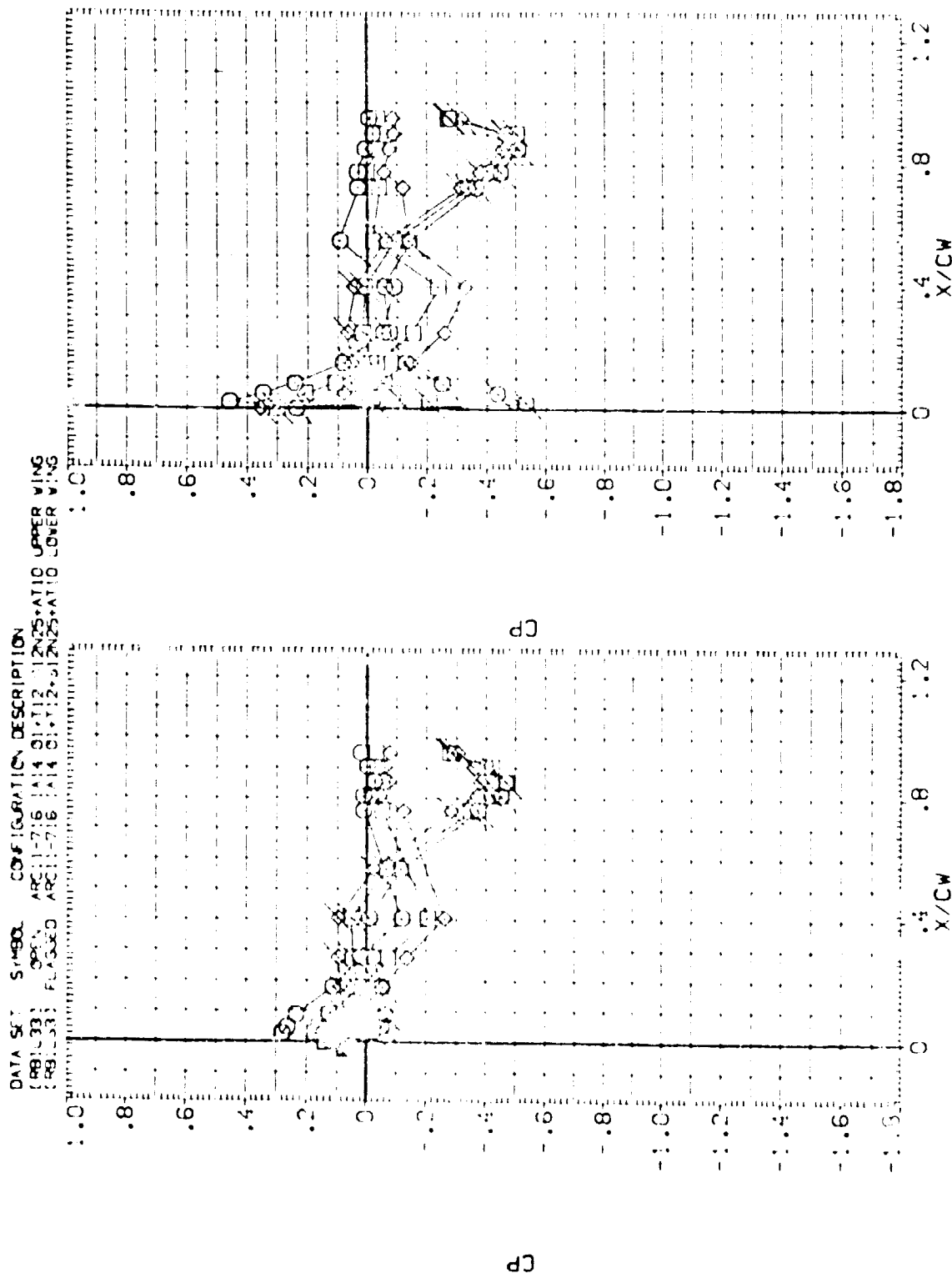
PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 SPOILER .000

ALPHA 1.8°
 BETA 8.120
 .299
 .364



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/B	BETA	PARAMETRIC VALUES		
○	-8.220	.427	8.120	MACH	1.250	ELEVON
○	-4.200	.534		RUDDER	1.000	SPDRK
	-1.160					.000



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL

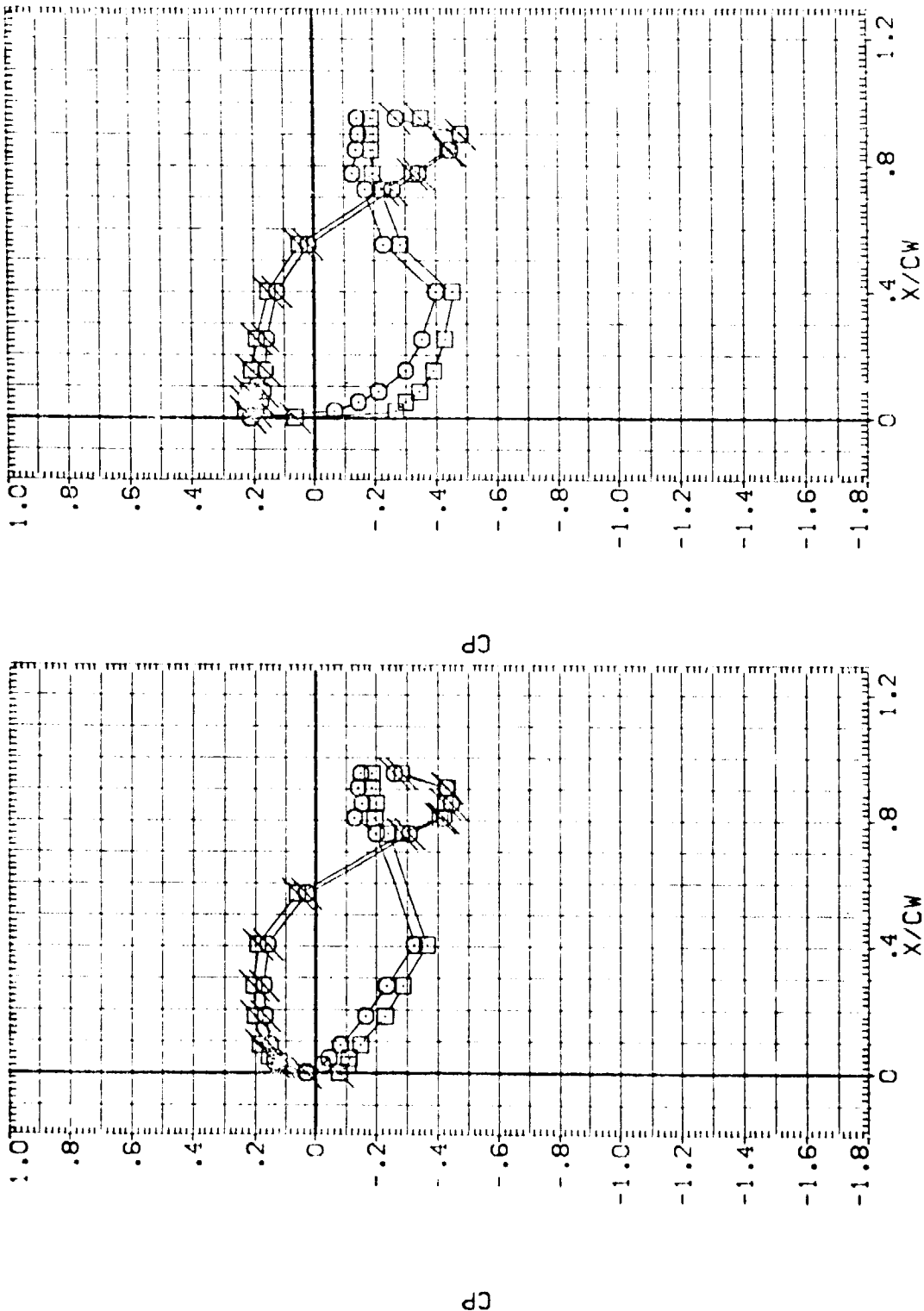
ALPHA 4.300
7.910

Y/BV .427
.534

BETA 8.120

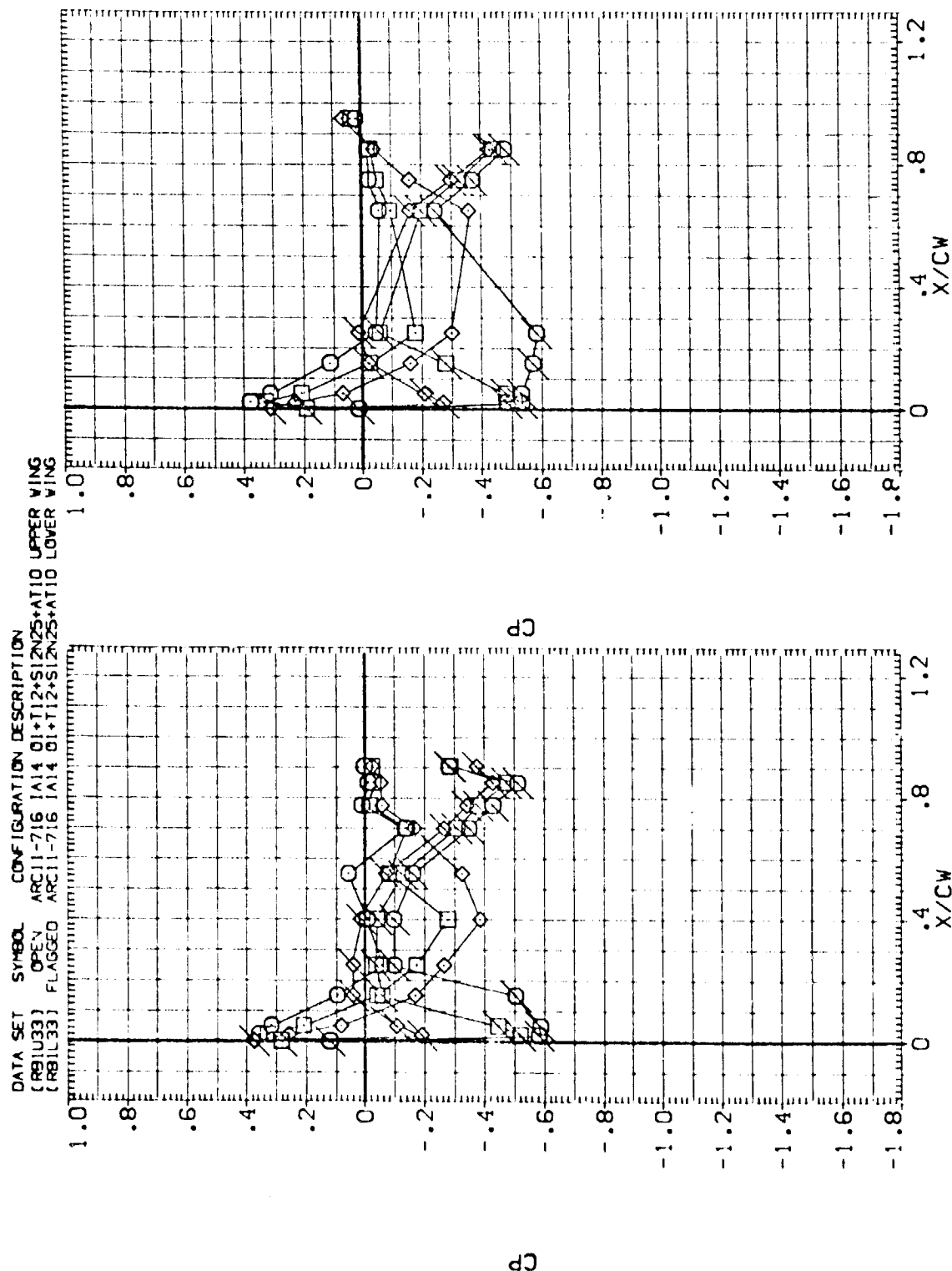
PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPOBRK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RBIU33) OPEN ARC11-716 [A14 01-T12-S12-25-AT10 UPPER WING
(RBIU33) FLAGGED ARC11-716 [A14 01-T12-S12-25-AT10 LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA0	PARAMETRIC VALUES	
	-8.220	.673	8.120	MACH	1.250
	-4.200	.780		RUDDER	.000
	-7.760				ELEVON
					SPDRK
					.000

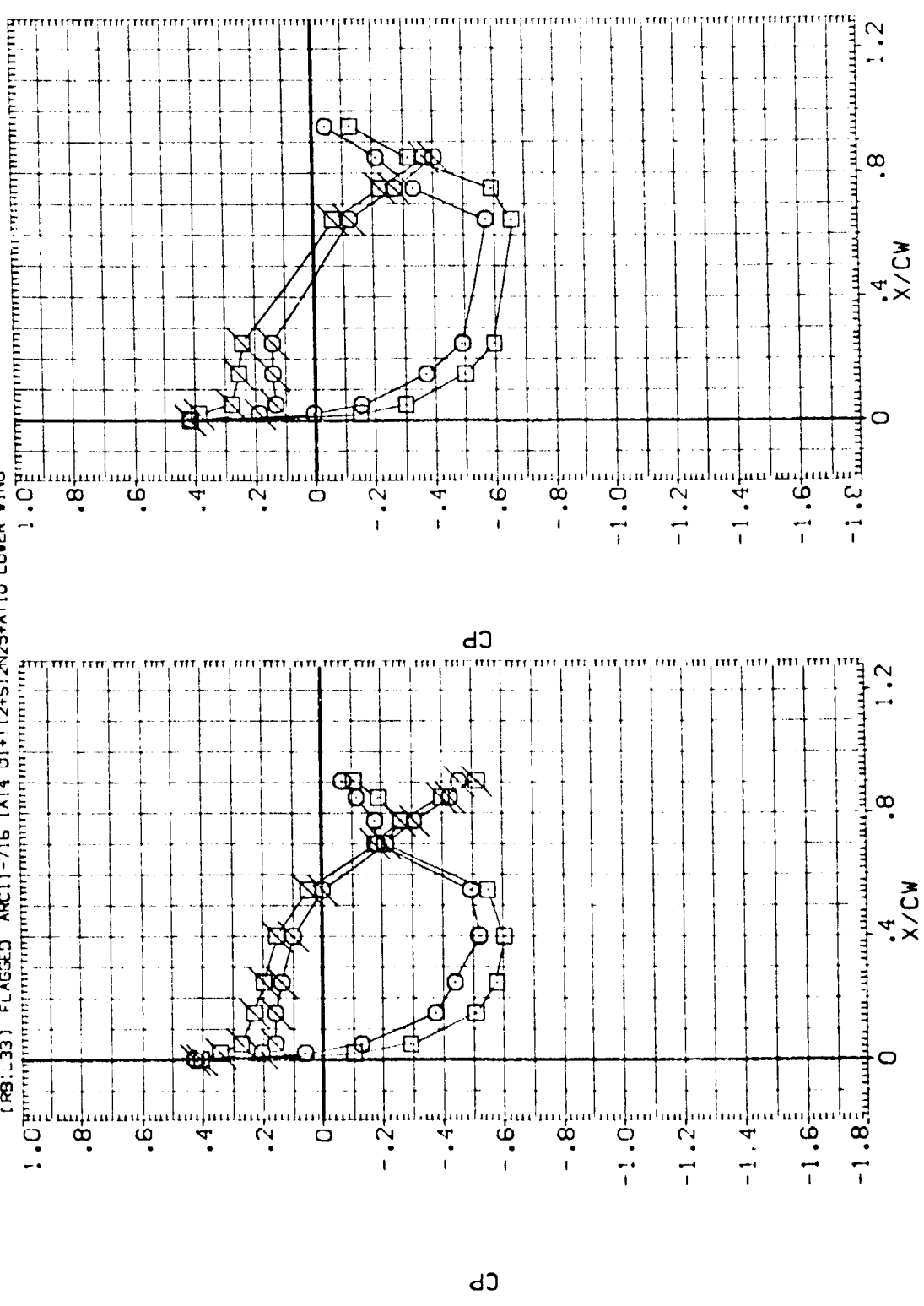


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH RUDDER 1.250 .000
 ELEVON SPOBRK .000

SYMBOL ALPHA0 Y/BV BETA0
 4.300 .673 8.120
 7.910 .780

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB11J23) OPEN ARC11-716 [A14 01+12+512+25+AT10] UPPER WING
 (RB11J33) FLAGGED ARC11-716 [A14 01+12+512+25+AT10] LOWER WING

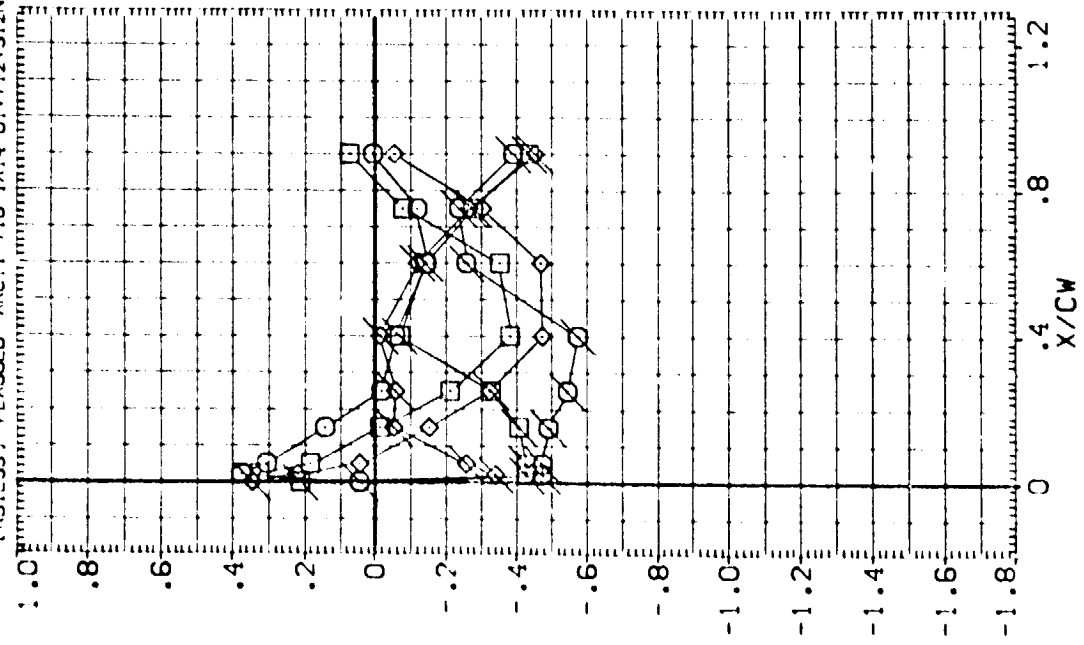


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

MACH 1.250
 RUDDER .000
 PARAMETRIC VALUES
 ELEVON .000
 SPOBRK .000

SYMBOL ALPHA0 Y/BV BE/AD
 -8.220 .887 8.120
 -4.200
 -7.60

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U33) OPEN ARC11-716 A14 01+712+S12N25+AT10 UPPER WING
 (R81L33) FLAGGED ARC11-716 A14 01+712+S12N25+AT10 LOWER WING

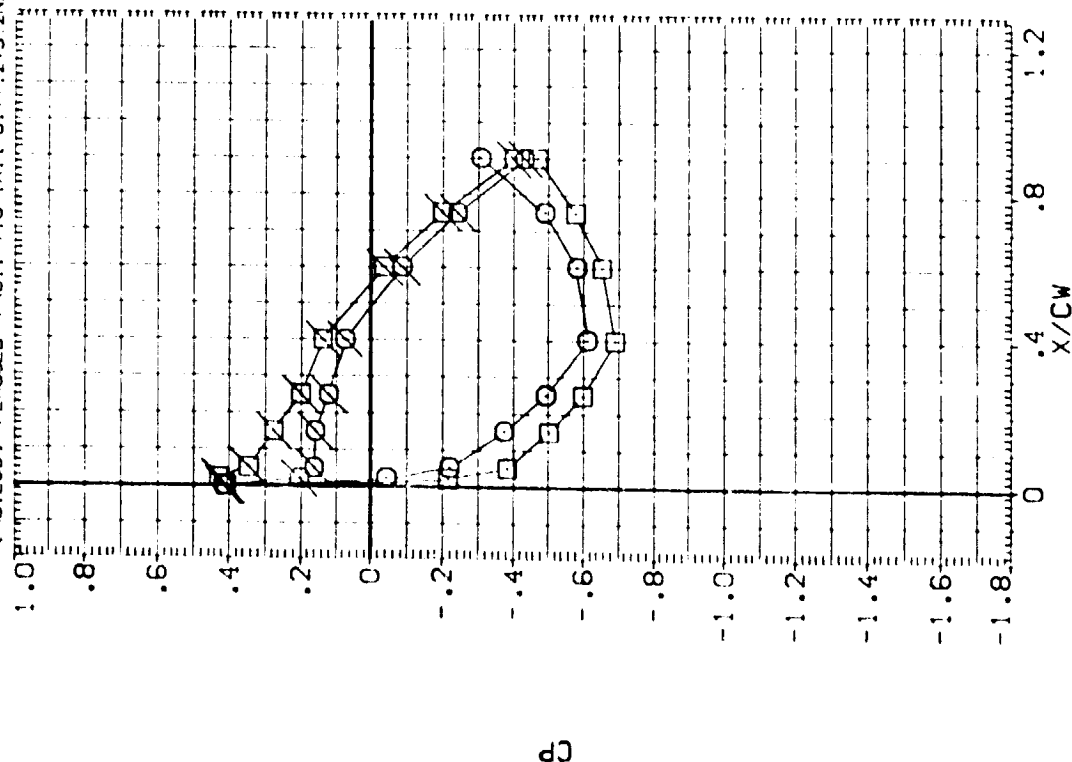


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPDBRK .000

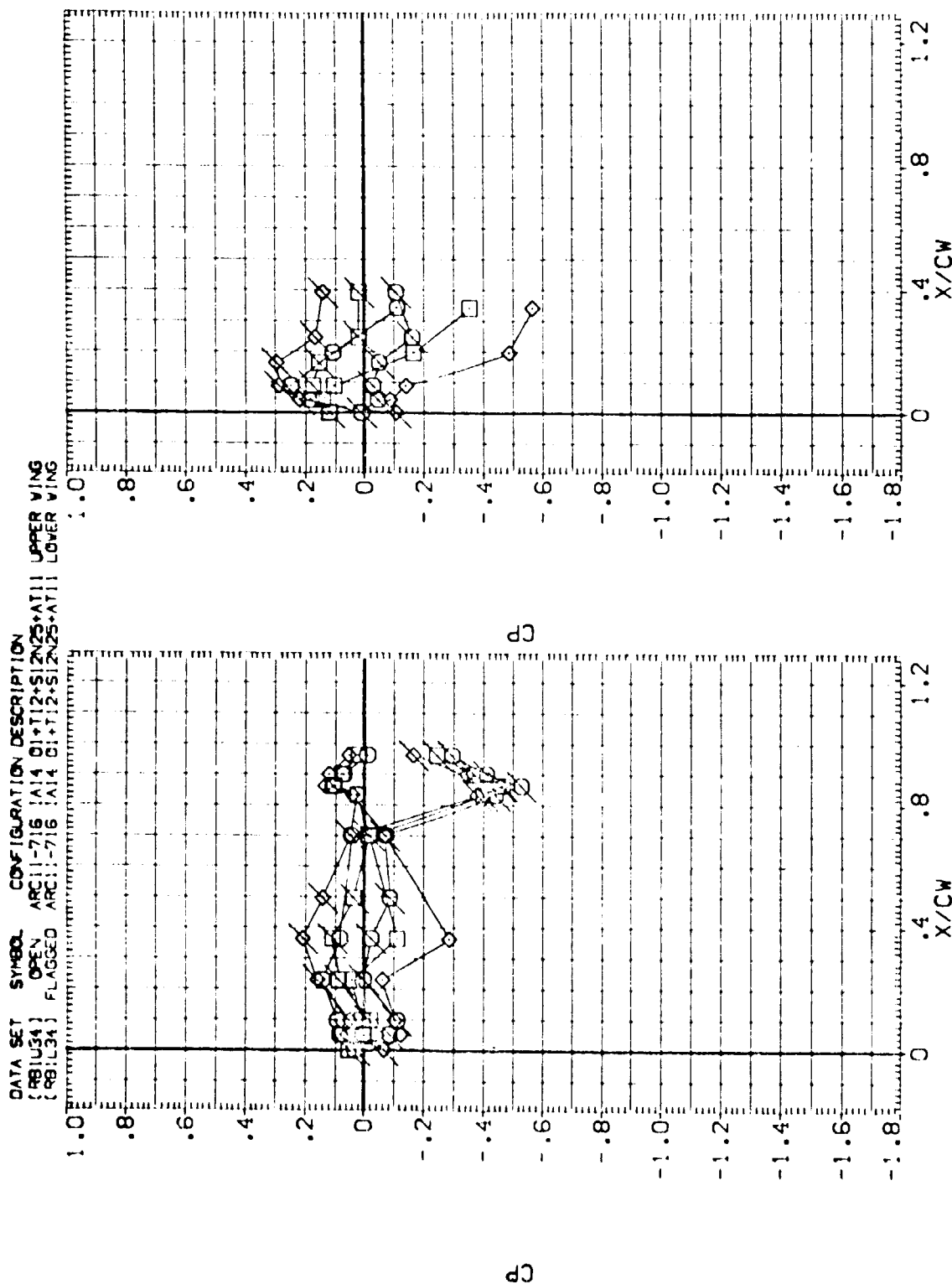
SYMBOL ALPHA-0 BETA-0
4.300 .887 8.120
7.910

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R81U33) OPEN ARC11-718 [A14 01+112+S12N25+AT10 UPPER WING
(R81U33) FLAGGED ARC11-718 [A14 01+112+S12N25+AT10 LOWER WING



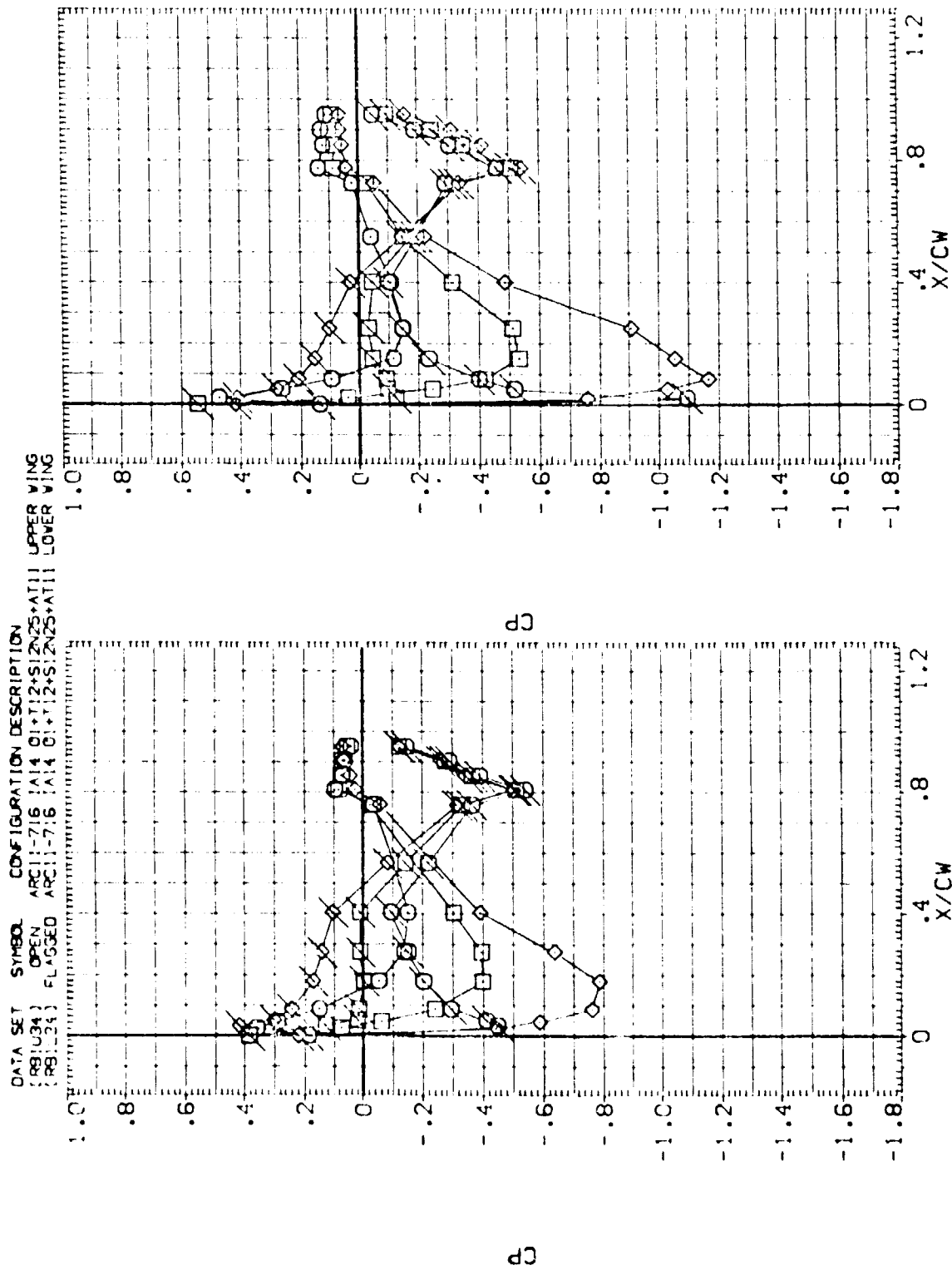
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	BETA	Y/BV	PARAMETRIC VALUES
○	-8.010	-7.580	.299	MACH .000 ELEVON .000
□	-3.10		.364	MACH .000 RUDDER .000
◇	7.890			



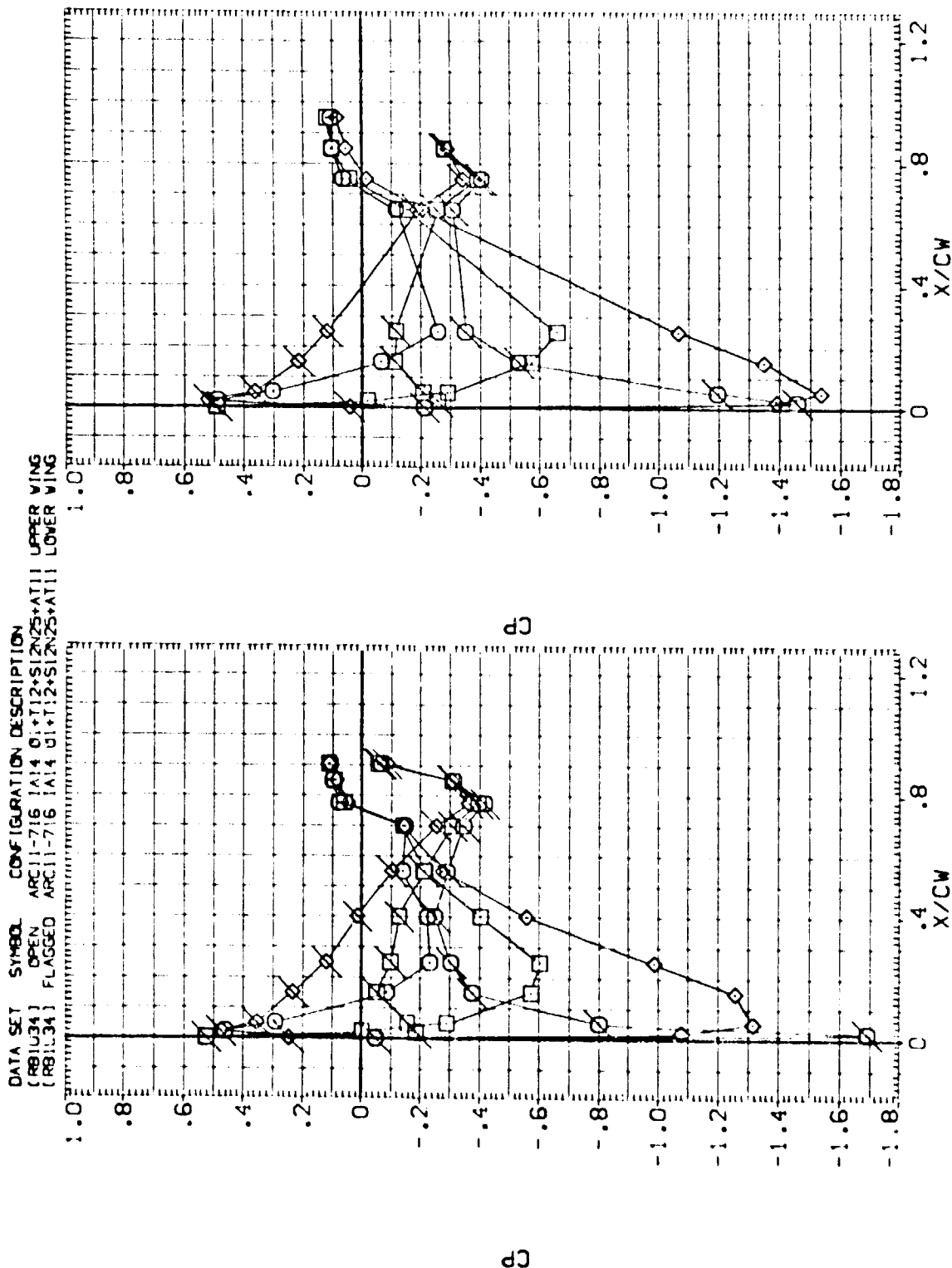
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	BETA	Y/BV	BETAG	MACH	PARAMETRIC VALUES
○	-8.0°C		.427	-7.980	RUDDER	.600 ELEVON
□	-3.1°C		.534			.000 SPOILER
◇	7.69°C					.000



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.010	.673	-7.980	RUDDER	.600 ELEVON
□	-3.310	.780			.000 SPOBRK
◇	7.890				.000

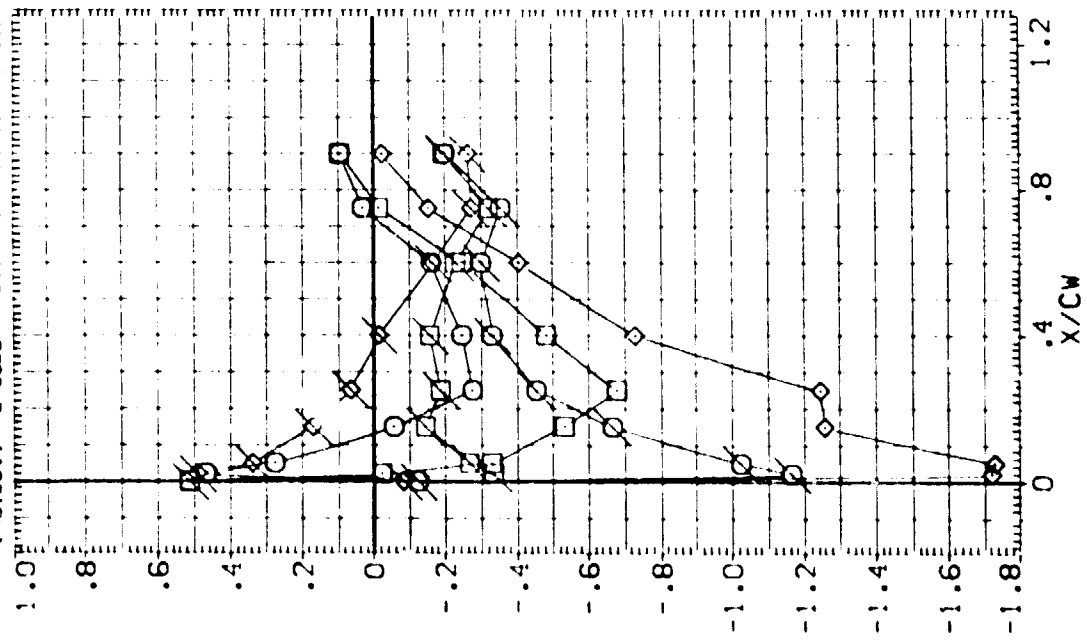


PARAMETRIC VALUES
 .600 ELEVON
 .000 SPOILER
 .000

MACH
 RUDDER

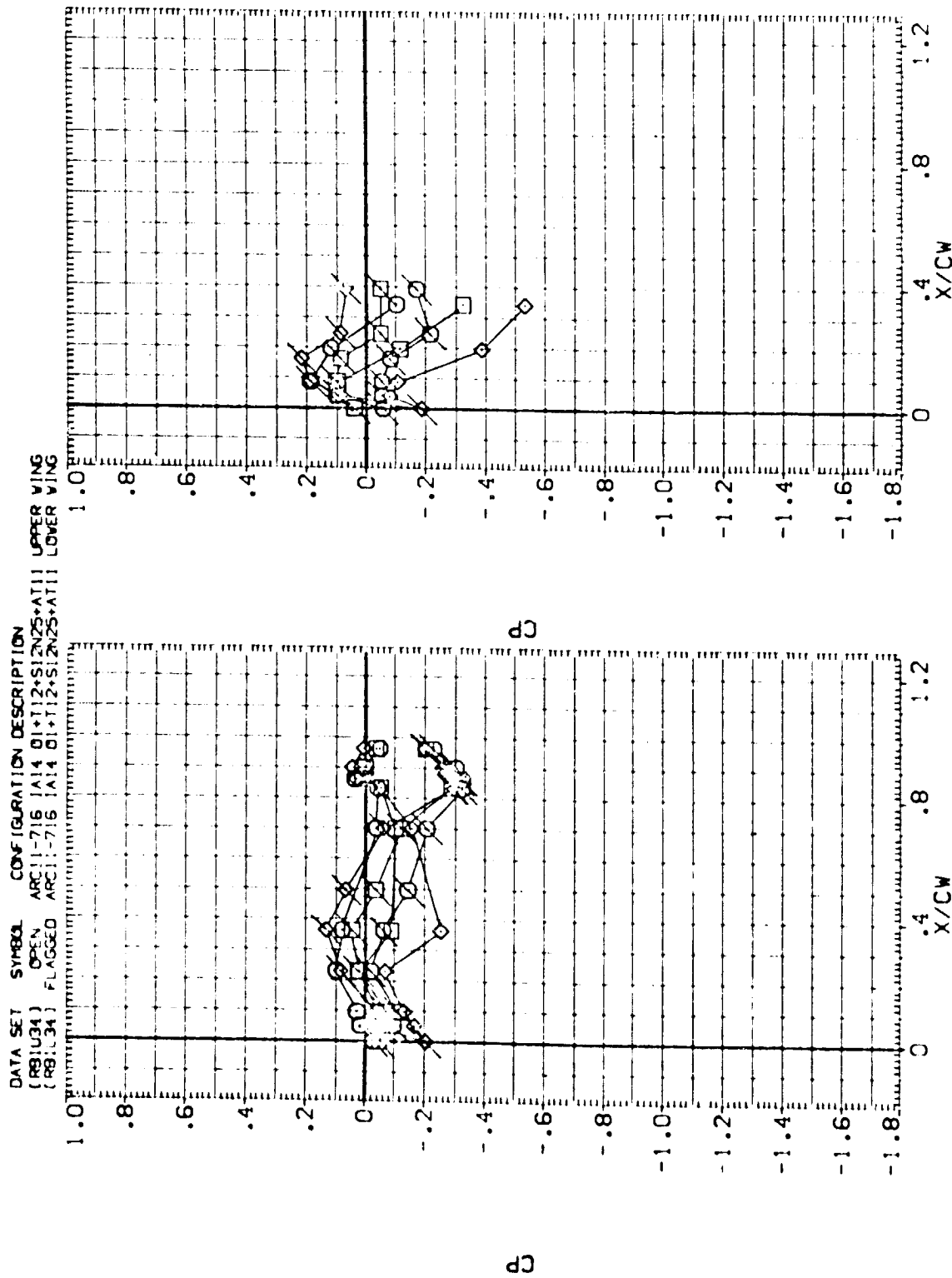
SYMBOL ALPHA0 Y/BV BETA0
 -8.010 .887 -7.980
 -3.10
 7.890

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1034) OPEN ARC11-716 [A14 0]112+S12N25+AT11 UPPER WING
 (RB1034) FLANGED ARC11-716 [A14 0]112+S12N25+AT11 LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
	-8.010	.299	.030	RUDDER	.600 ELEVON
	-3.10	.364			.000 SPDRK
	7.890				.000

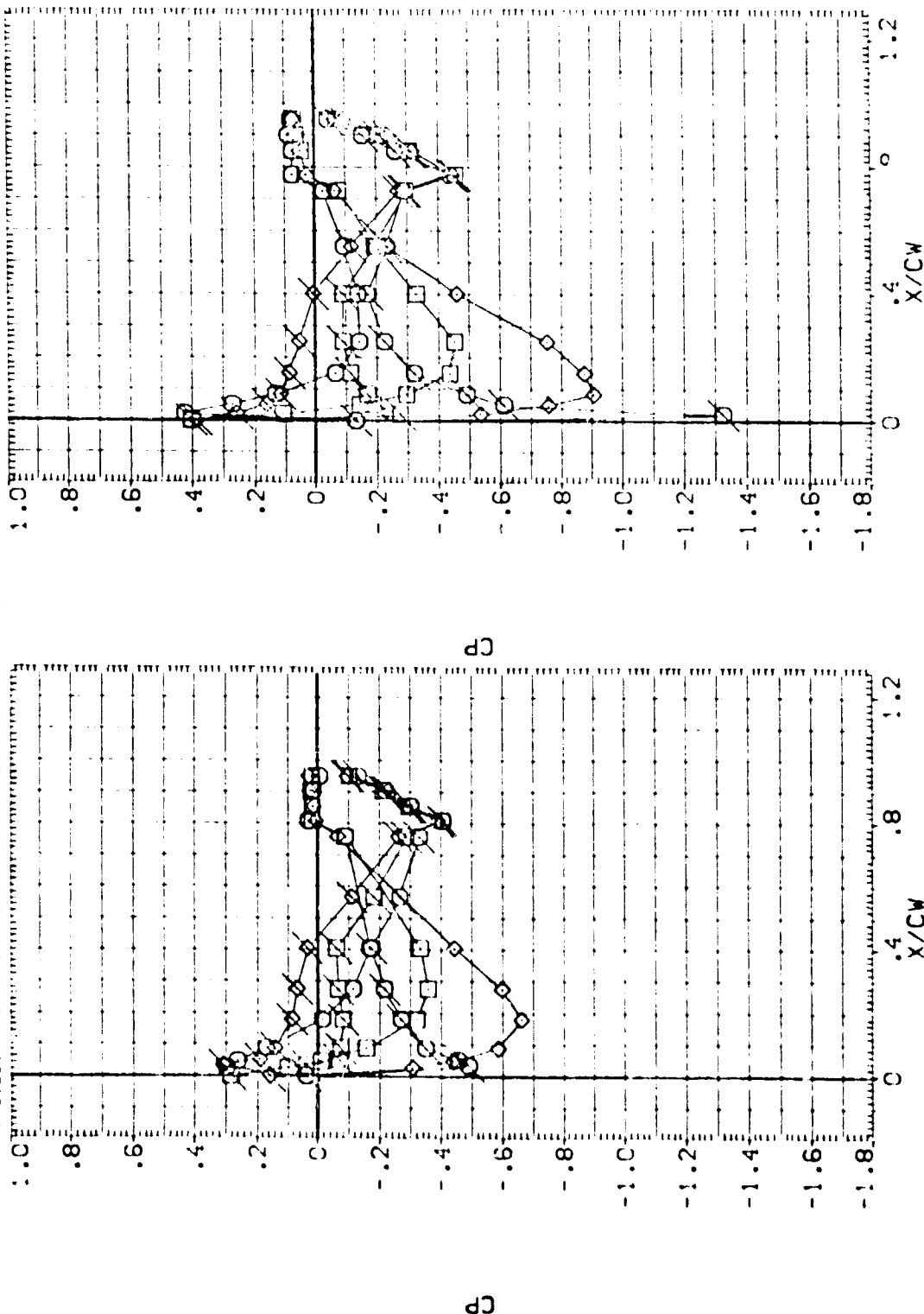


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH .600
 RUDDER .000
 ELEVON .000
 SPOILER .000

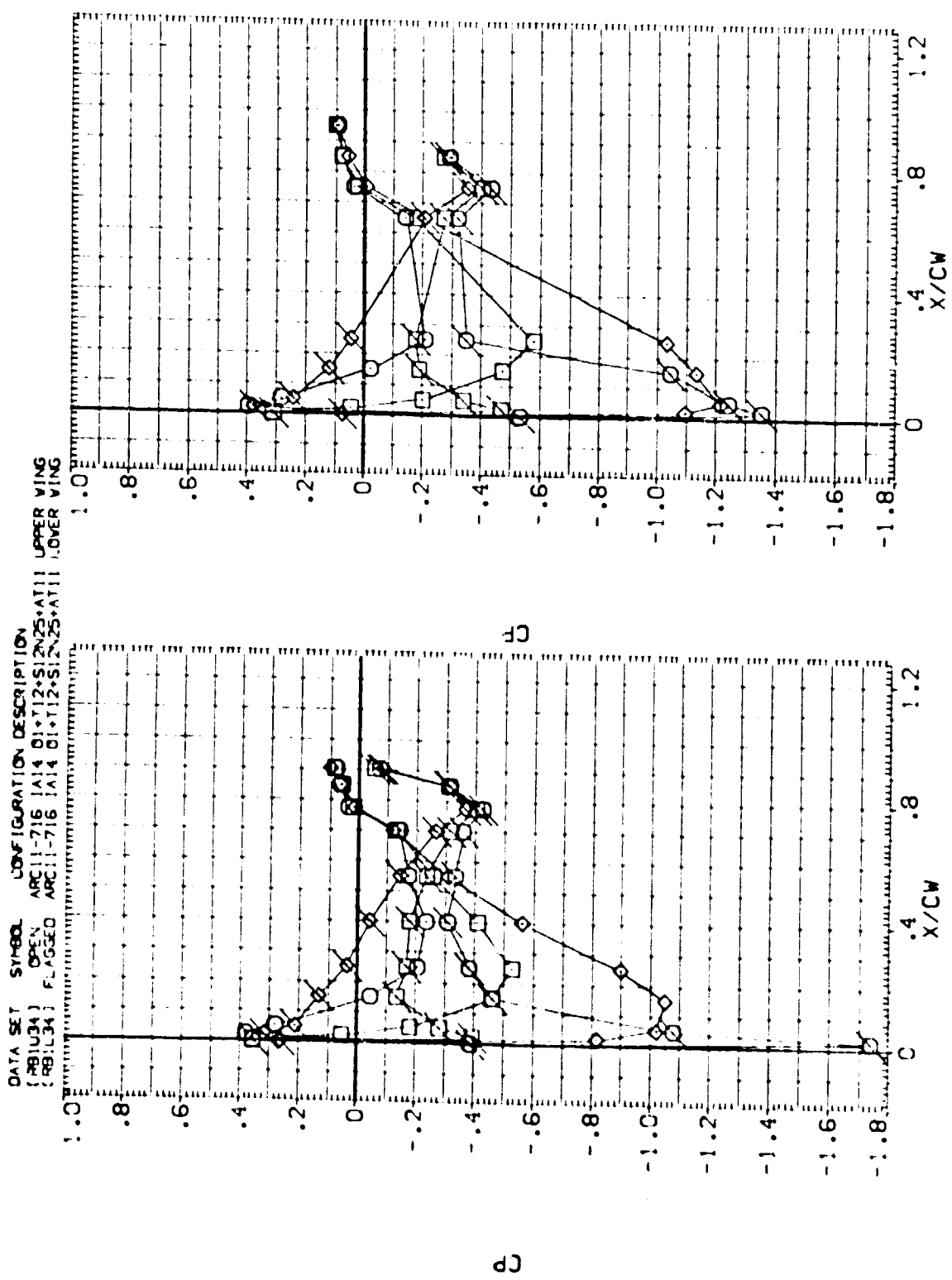
ALPHA 8.010
 BETA 0.030
 Y/B 0.427
 .534
 7.890

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1034) OPEN ARC11-716 [A14 01+T12+S12+25+AT11] UPPER WING
 (RB1034) FLASSED ARC11-716 [A14 01+T12+S12+25+AT11] LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA0	Y/BV	BETAC	MACH	PARAMETRIC VALUES
○	-0.01C	.673	.030	RUDDER	.600 ELEVON
□	-.31C	.780			.000 SPOILER
◇	7.69C				

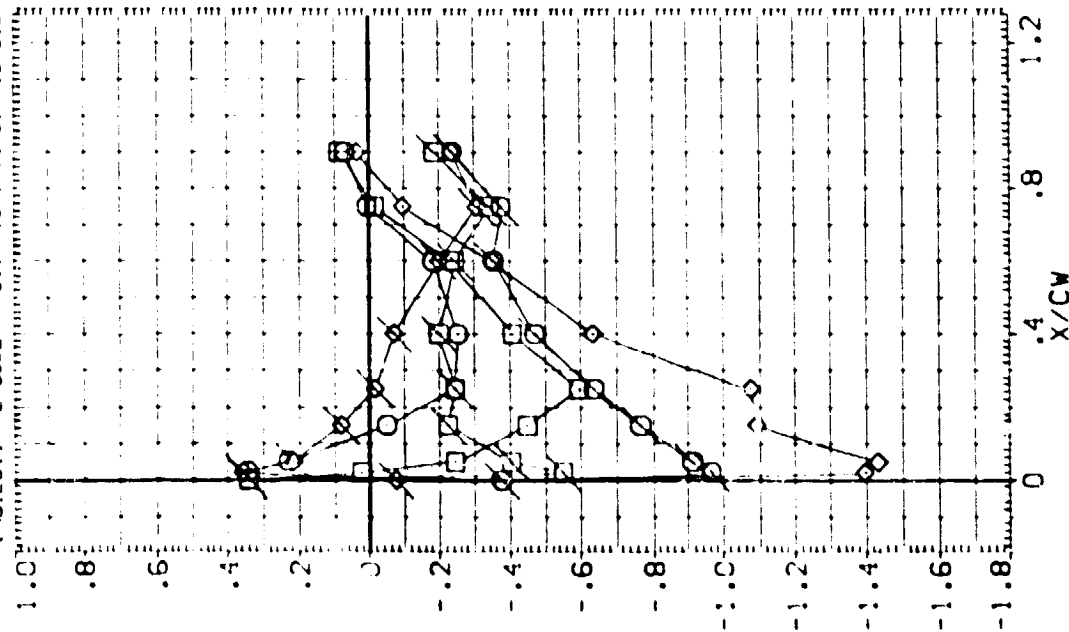


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH .600 ELEVON .000
 RUDDER .000 SPOBRK .000

ALPHAO Y/BV BETAO
 -8.010 .887 .030
 -3.10
 7.890

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R9)U34) OPX 11 ARC 11-716 [A:4 01+12+5:2+25+AT1] UPPER WING
 (R8)U34) FL+GLCJ ARC 11-716 [A:4 01+12+5:2+25+AT1] LOWER WING

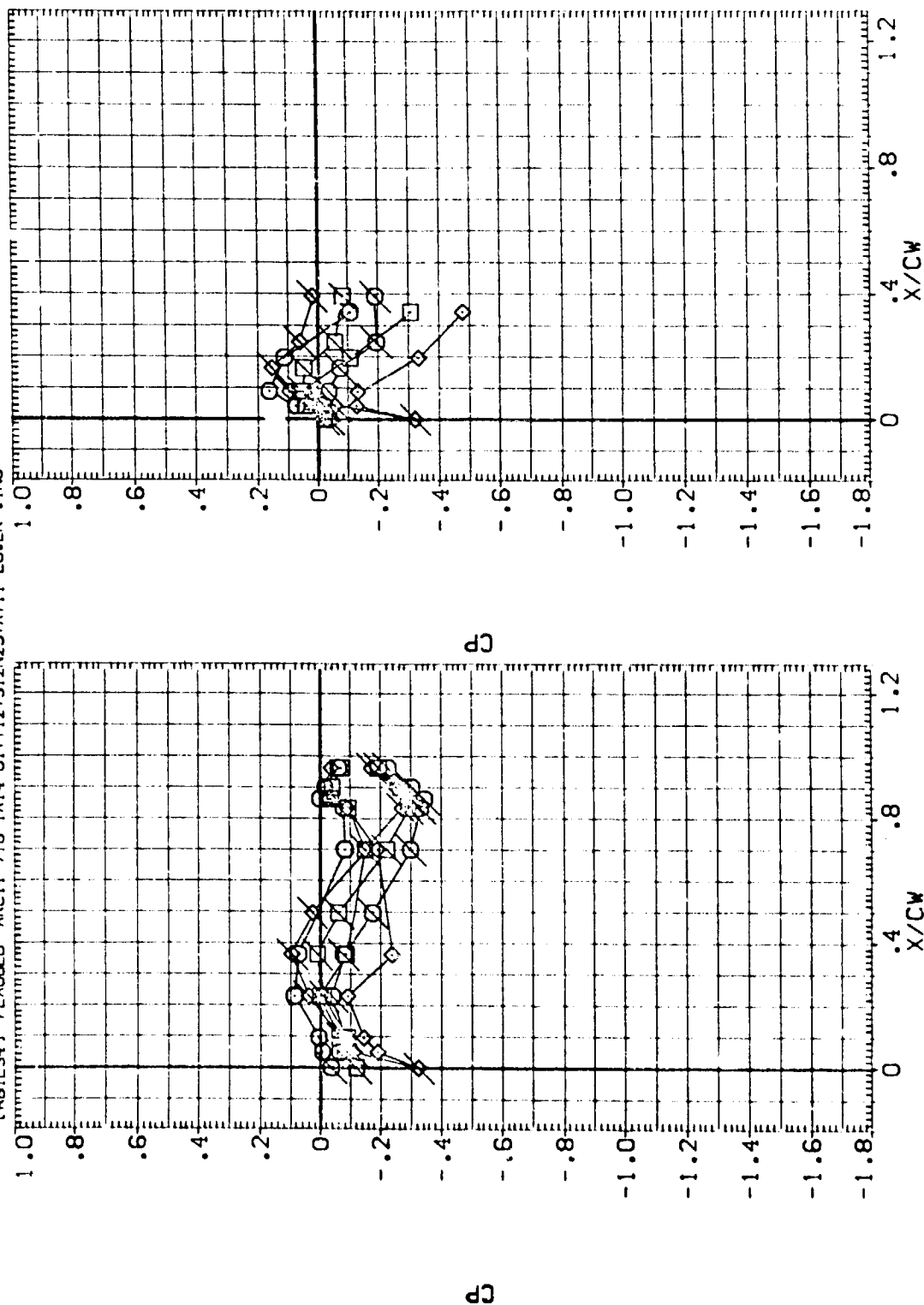


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000

SYMBOL ALPHA Y/BV BETAB
○ 8.010 .299 4.050
□ .310 .364
◇ 7.890

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RB1U34) OPEN ARC11-716 1A14 01+T12+S12N25+AT11 UPPER WING
(RB1L34) FLAGGED ARC11-716 1A14 01+T12+S12N25+AT11 LOWER WING

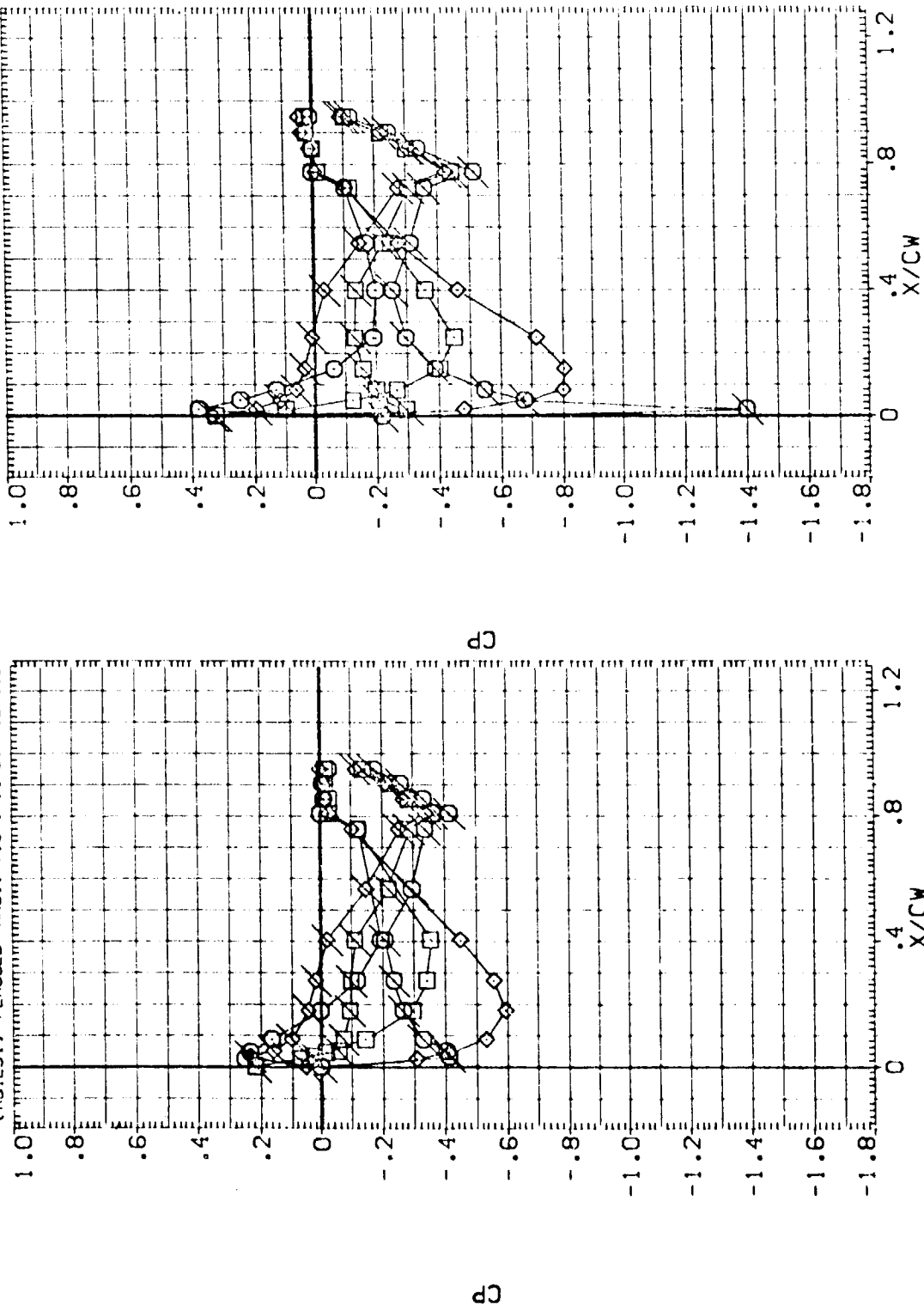


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
MACH .600
RUDDER .000
ELEVON .000
SPDRK .000

SYMBOL ALPHA Y/BV BETA
○ -8.010 .427 4.050
□ -3.10 .534
◇ 7.890

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R31U34) OPEN ARC11-716 [A14 01+112-S12N25+AT11] UPPER WING
(F81L34) FLAGGED ARC11-716 [A14 01+112-S12N25+AT11] LOWER WING

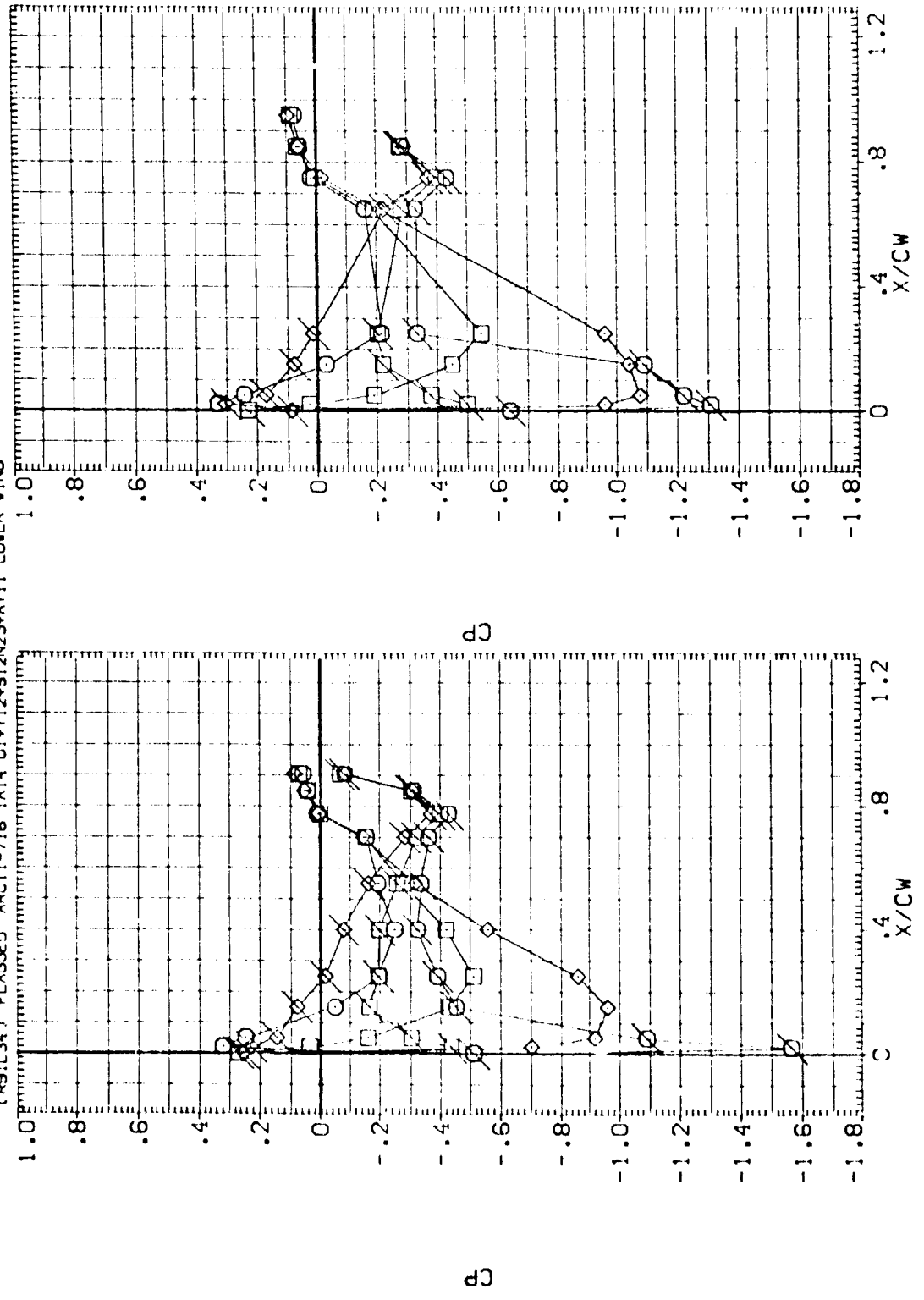


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 .600 ELEVON
 .000 SPOBRK
 MACH
 RUDDER

SYMBOL ALPHA0 Y/BV BETA0
 -8.010 .673 4.090
 -3.310 .780
 7.690

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R91U34) OPEN ARC11-716 [A14 01+T12+S12N25+AT1] UPPER WING
 (R91U34) FLAGGED ARC11-716 [A14 01+T12+S12N25+AT1] LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

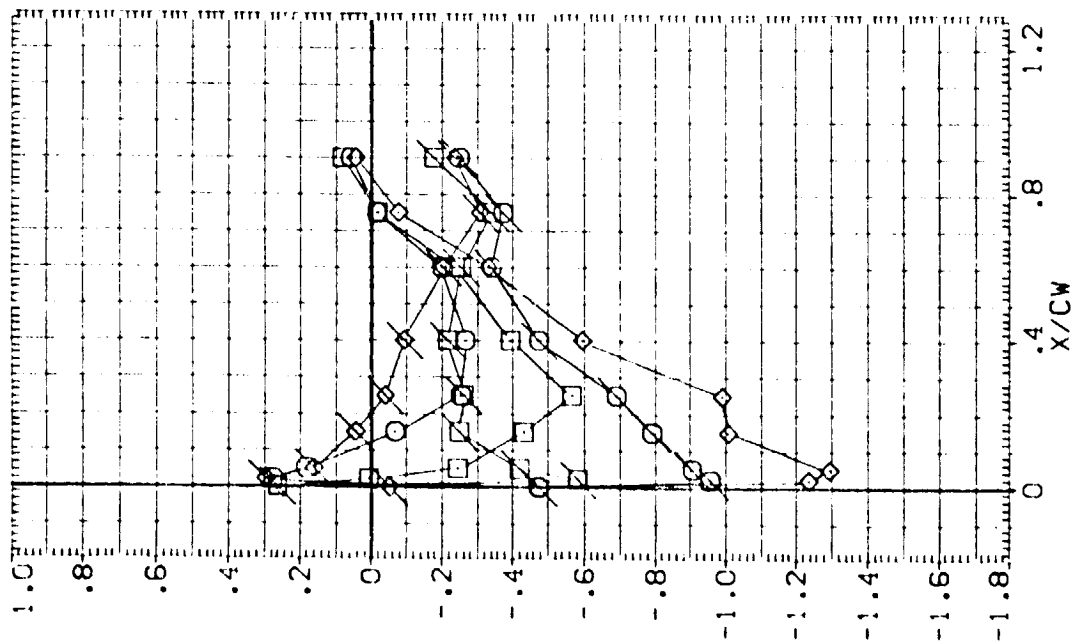
SYMBOL
○ □ ◇

ALPHA
-8.010
-3.310
7.890

Y/BV .887
BETA 4.090

PARAMETRIC VALUES
MACH .600
ELEVON .300
RUDDER .300

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(PB1U34) OPEN ARC11-716 [A14 01+112+S12+25+AT1] UPPER WING
(PB1L34) FLASSED ARC11-716 [A14 01+112+S12+25+AT1] LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL
○ □ ◇

ALPHA 0
-8.0:0
-3.0:0
7.690

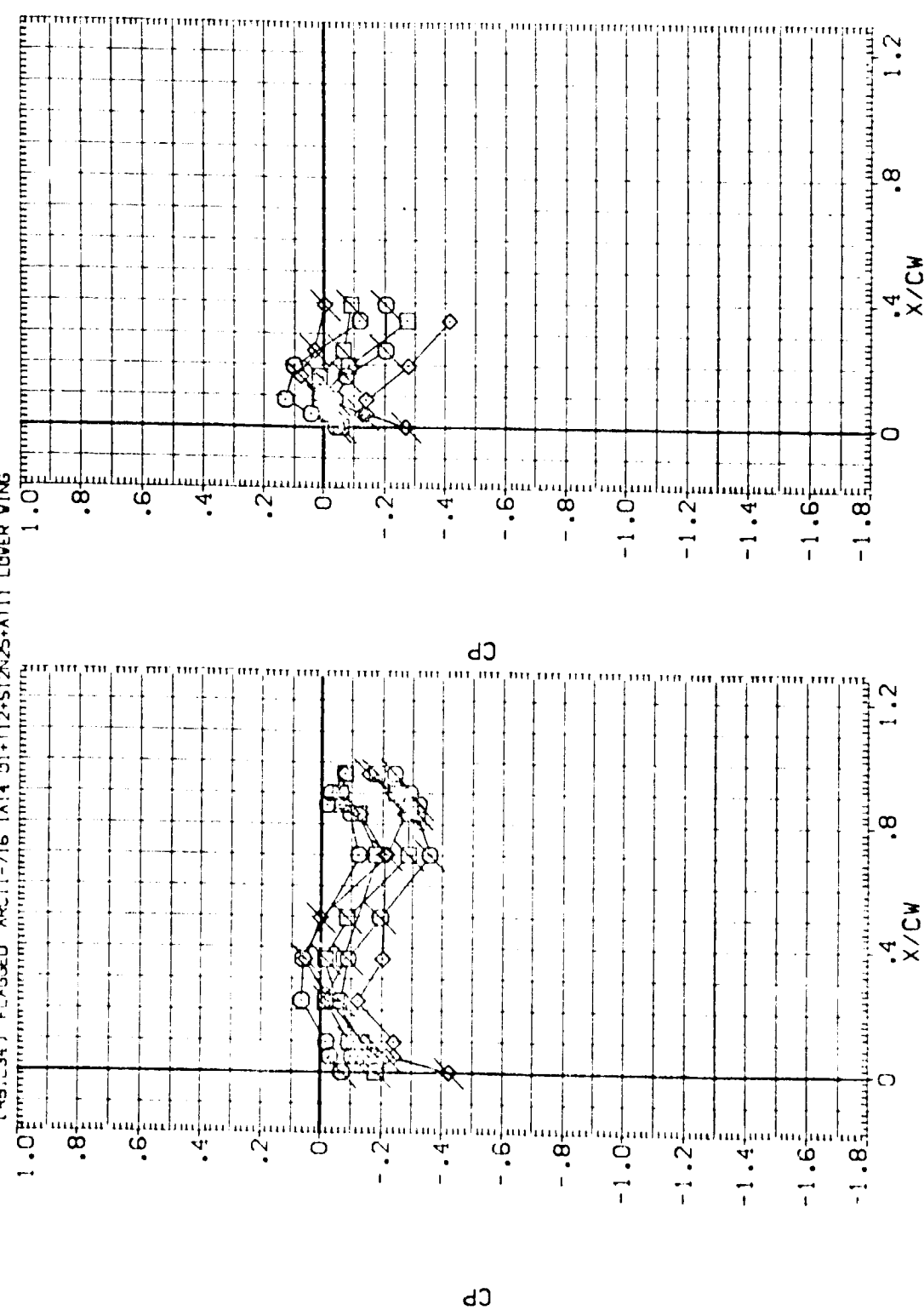
Y/BV
.299
.364

BETA 0
8.130

MACH
RUDDER

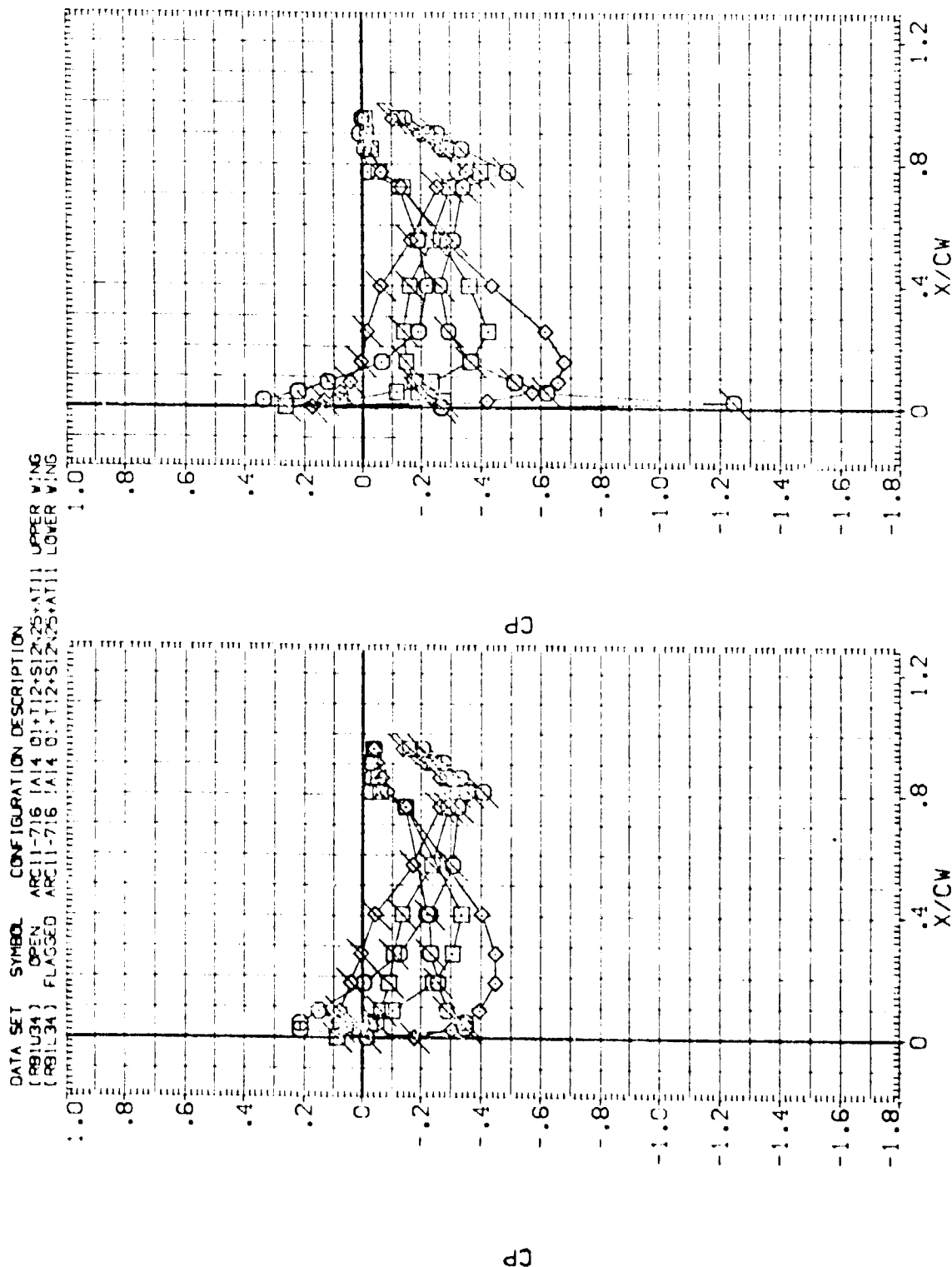
PARAMETRIC VALUES
.600 .000
ELEVON .000
SPOILER .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R81U34) OPEN ARC11-716 [A14 01+T12+S12+25+AT1] UPPER WING
(R81U34) FLAGGED ARC11-716 [A14 01+T12+S12+25+AT1] LOWER WING



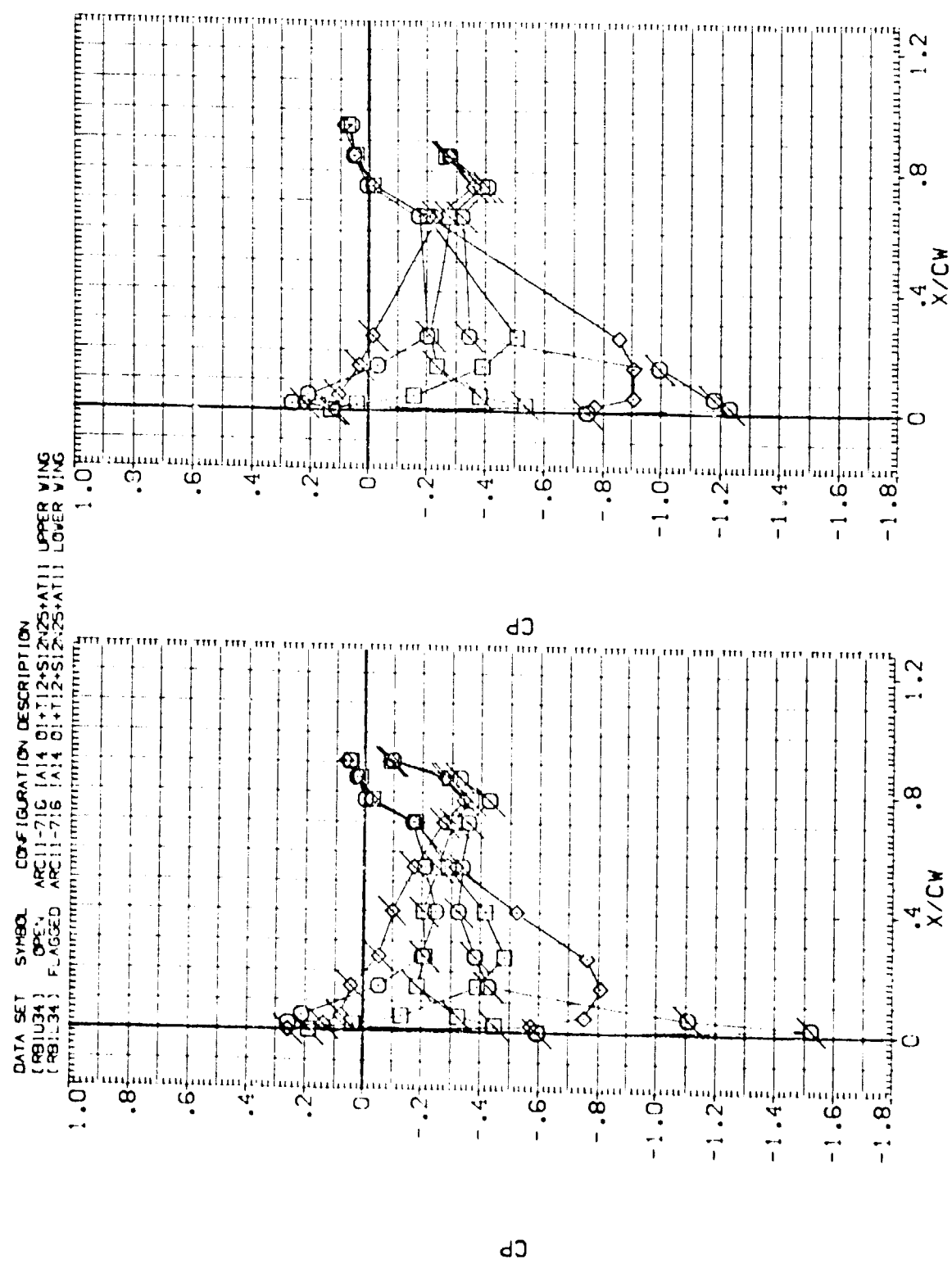
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.010	.427	8.130	RUDDER	.600 ELEVON .000
□	-3.10	.534			.000 SPDBRK .000
◇	7.890				



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.010	.673	6.100	RUDDER	.600 ELEVON
◇	-3.10	.780			.000 SPEED



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL
 ○
 □
 ◇

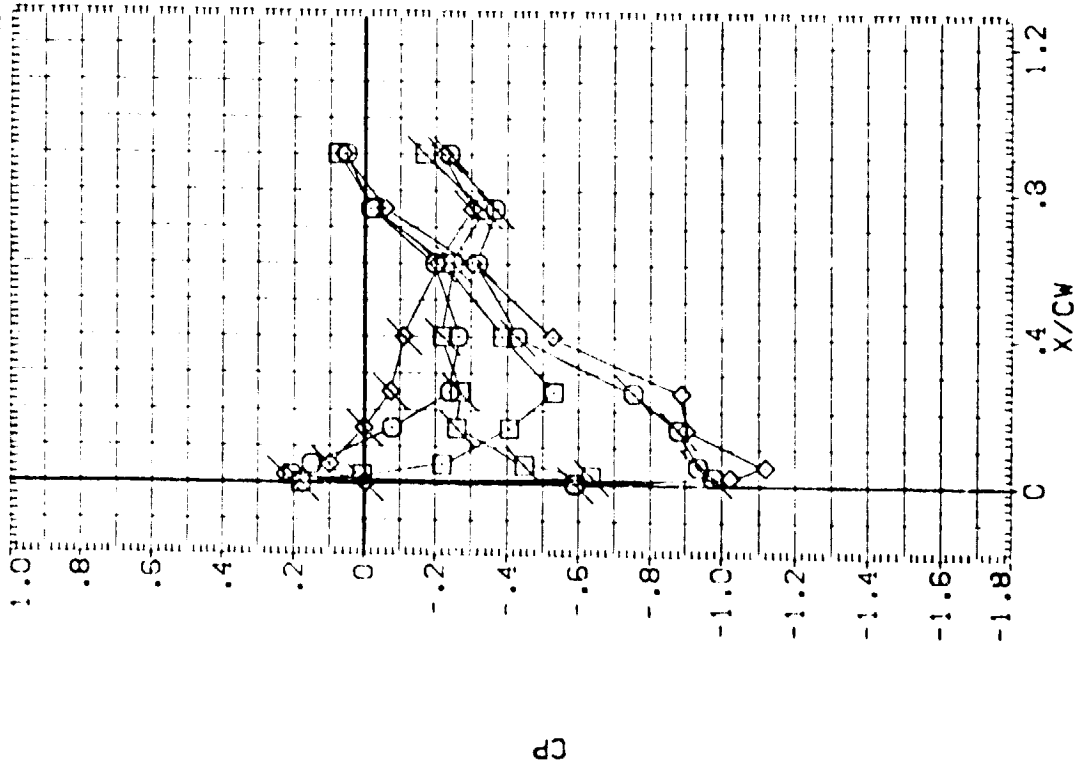
ALPHA0
 -8.010
 -7.310
 7.690

Y/BA
 .887

BETA0
 8.130

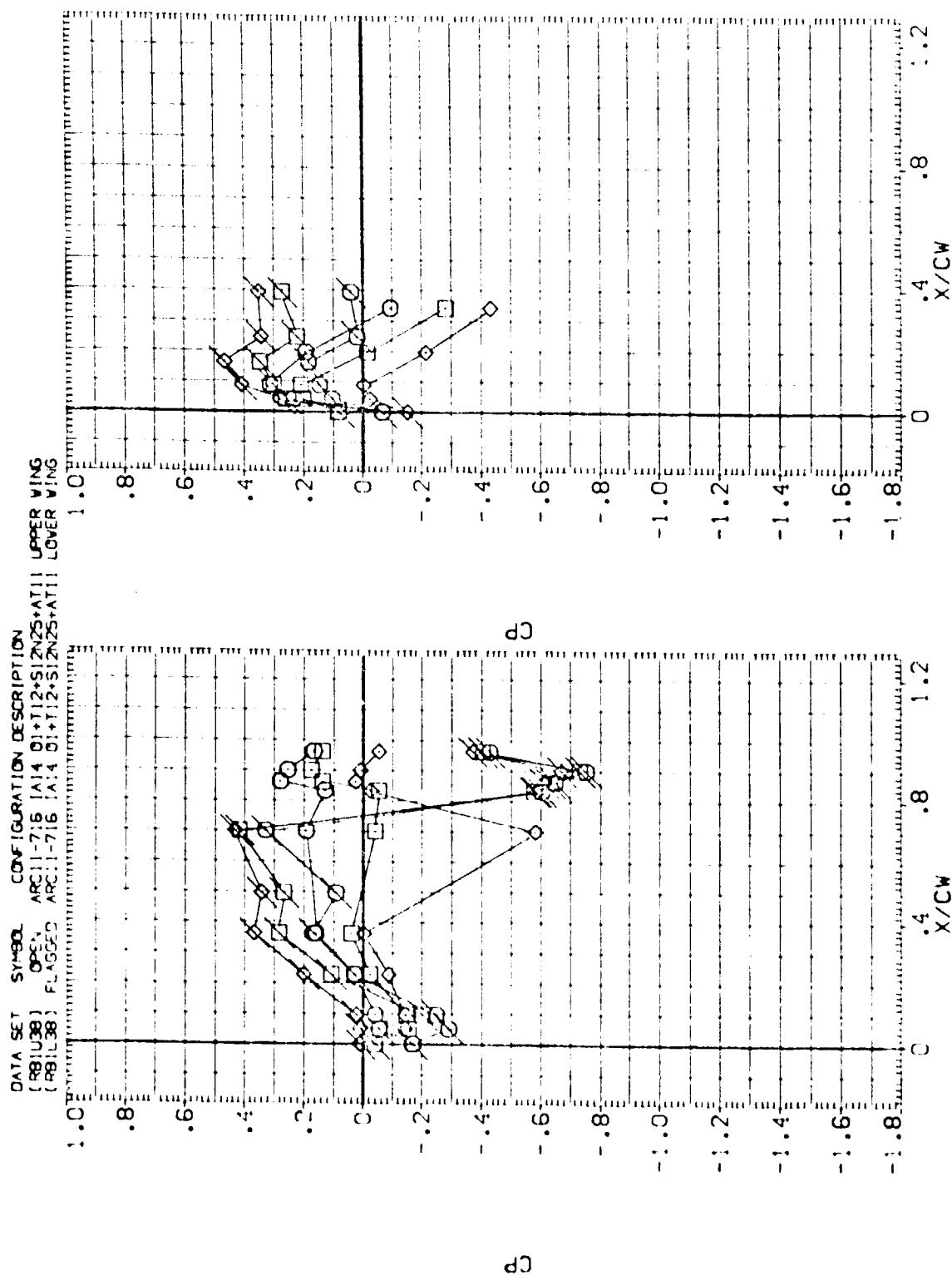
PARAMETRIC VALUES
 MACH .500
 RUDDER .000
 ELEVON .000
 SPOBRK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1J34) OPEN ARC11-7:6 [A14 G1+T12-S12N25+AT1] UPPER WING
 (RB1J34) FLAGGED ARC11-7:6 [A14 G1+T12-S12N25+AT1] LOWER WING



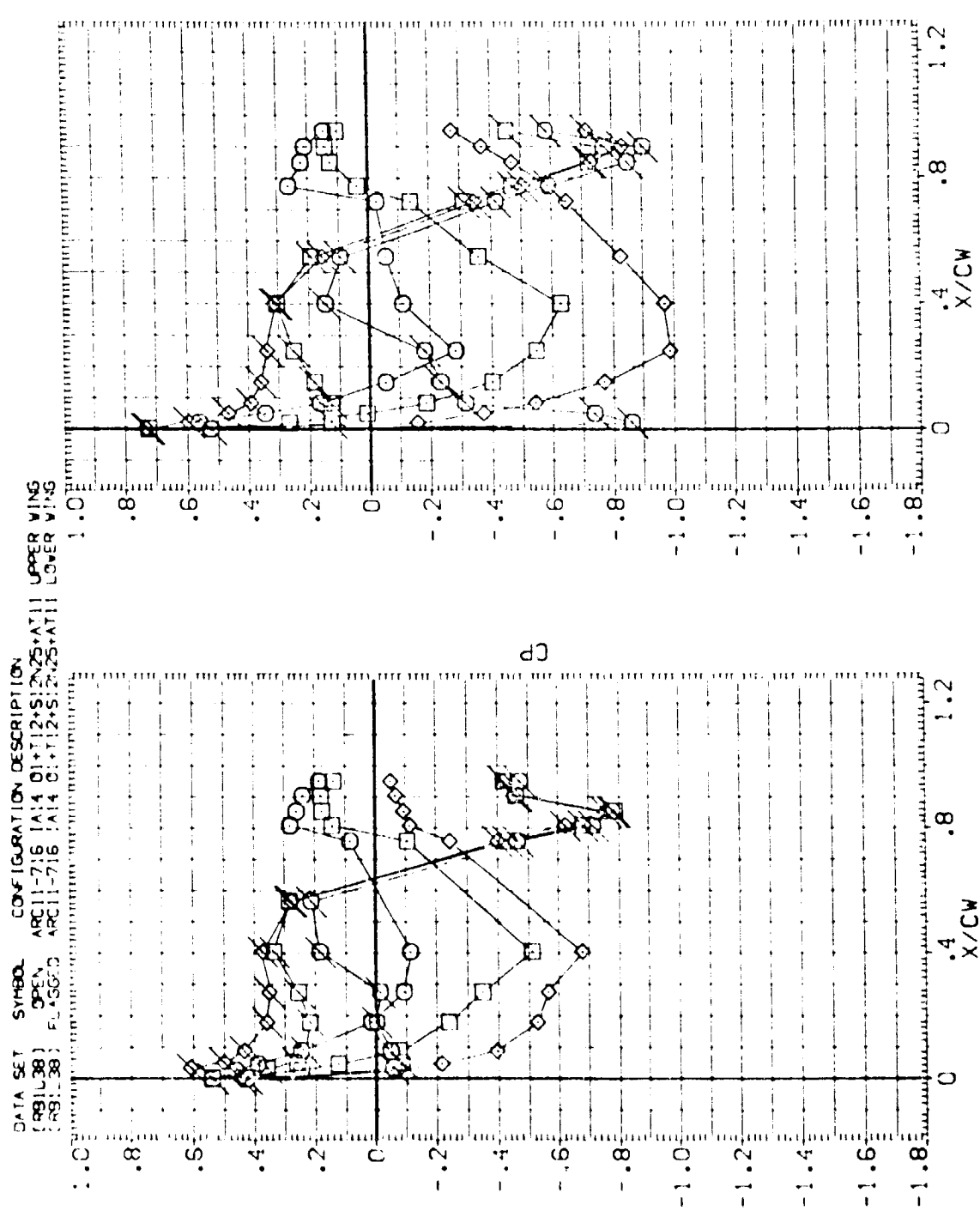
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.080	.299	-8.020	RUDDER	1.050 ELEVON
◇	-3.10	.364			.000 SPOILER
	7.930				



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA0 Y/B BETA0 MACH PARAMETRIC VALUES
 -8.080 .427 -8.020 RUDDER 1.050 ELEVON .000
 -3.10 .534 .000 SPOILER .000
 7.930

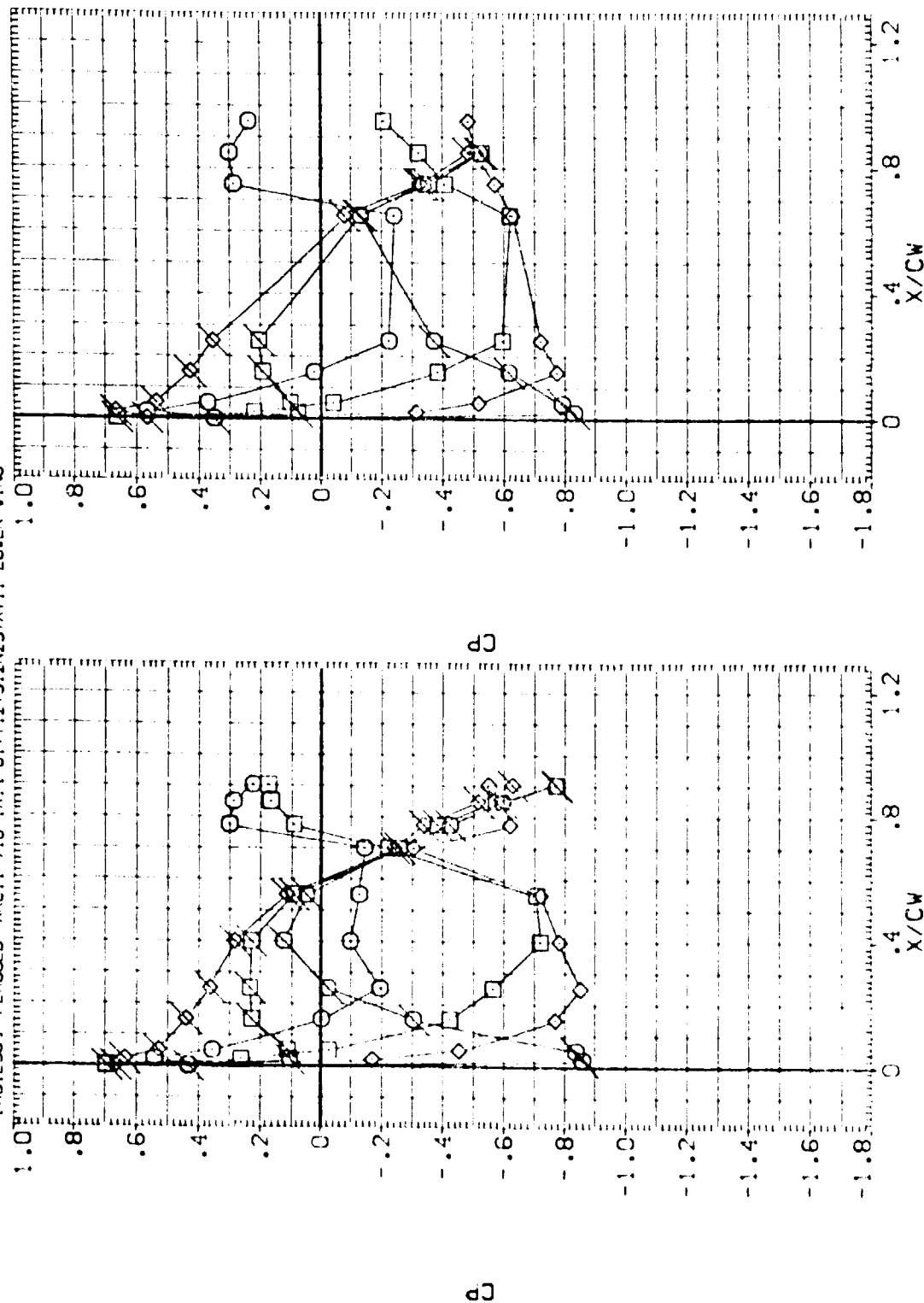


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL ALPHA Y/BV BETAD
 O -8.080 .673 -8.020
 □ -3.310 .780
 ◇ 7.93C

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R31L38) OPEN ARC11-716 1A14 01+112+512N25+AT11 UPPER WING
 (R31L38) FLAGGED ARC11-716 1A14 01+112+512N25+AT11 LOWER WING



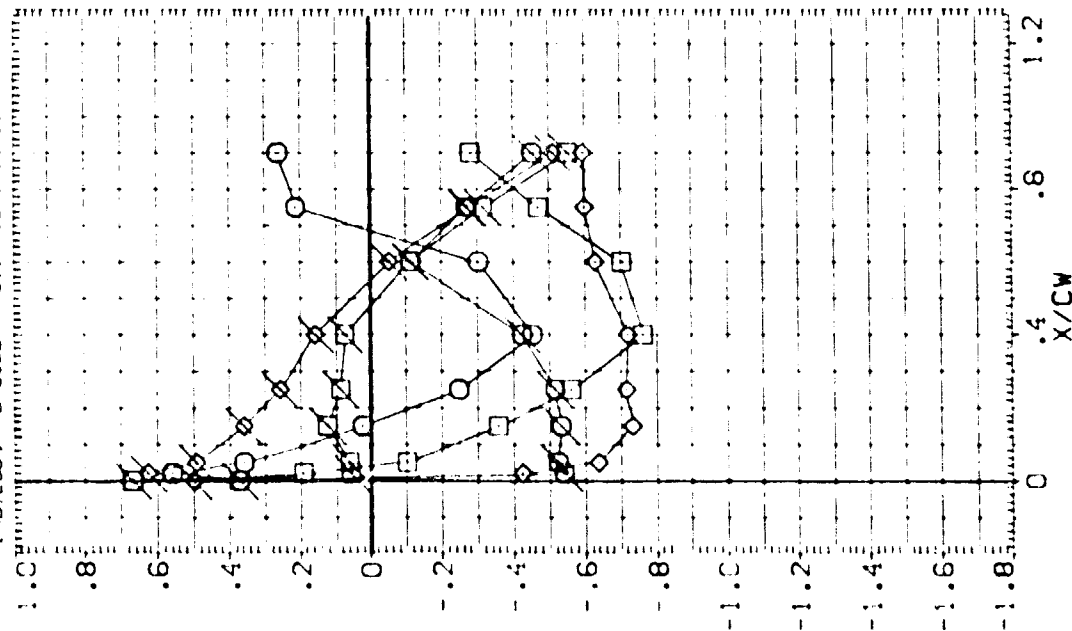
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA
 O -8.080
 X -3.10
 D 7.930

Y/B* .887
 BETAS -8.020

PARAMETRIC VALUES
 MACH 1.050
 ELEVON .000
 RUDDER .000
 SPEED .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81U38) OPEN ARC11-7:5 (A14 0:112+S12:25+AT11) UPPER WING
 (R81U38) FLAGGED ARC11-7:5 (A14 0:112+S12:25+AT11) LOWER WING



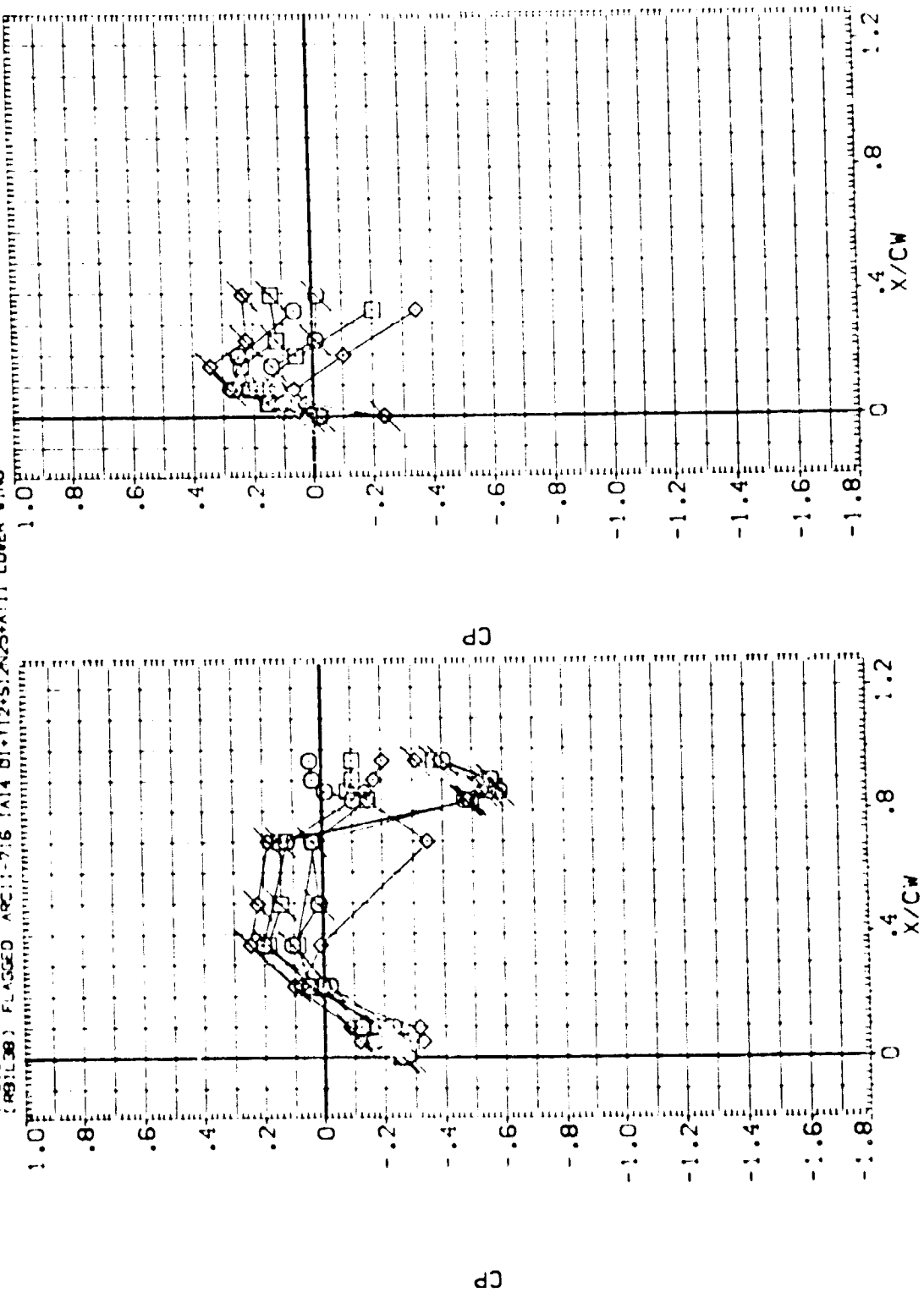
83

CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 RUDDER .000

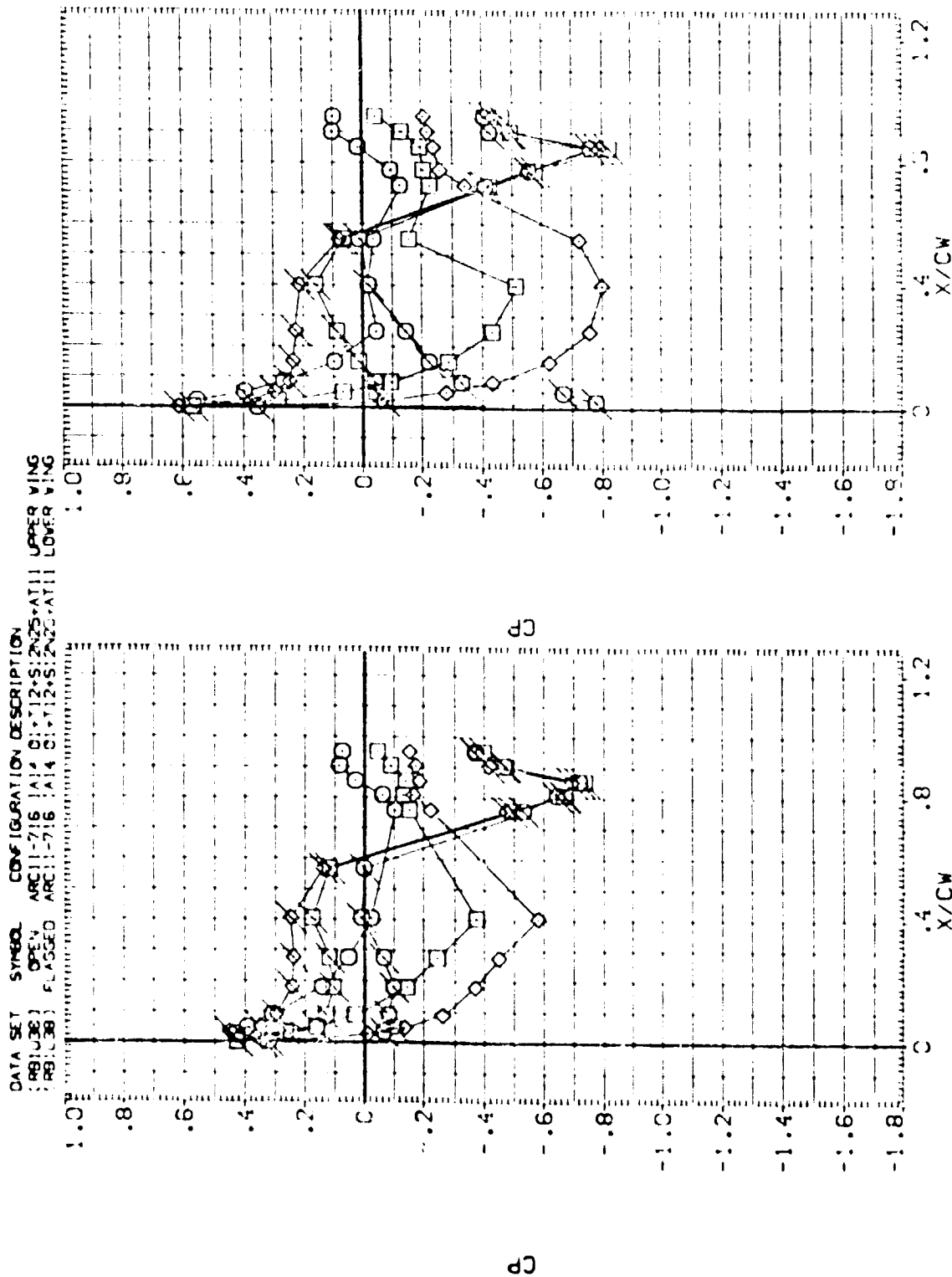
SYMBOL ALPHA₀ Y/BV BETA₀
 ○ -8.080 .299 .030
 □ -3.310 .364
 ◇ 7.930

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (781038) OPEN ARC11-716 [A14 01-T12-S12-25-AT1] UPPER WING
 (891138) FLAGGED ARC11-716 [A14 01-T12-S12-25-AT1] LOWER WING



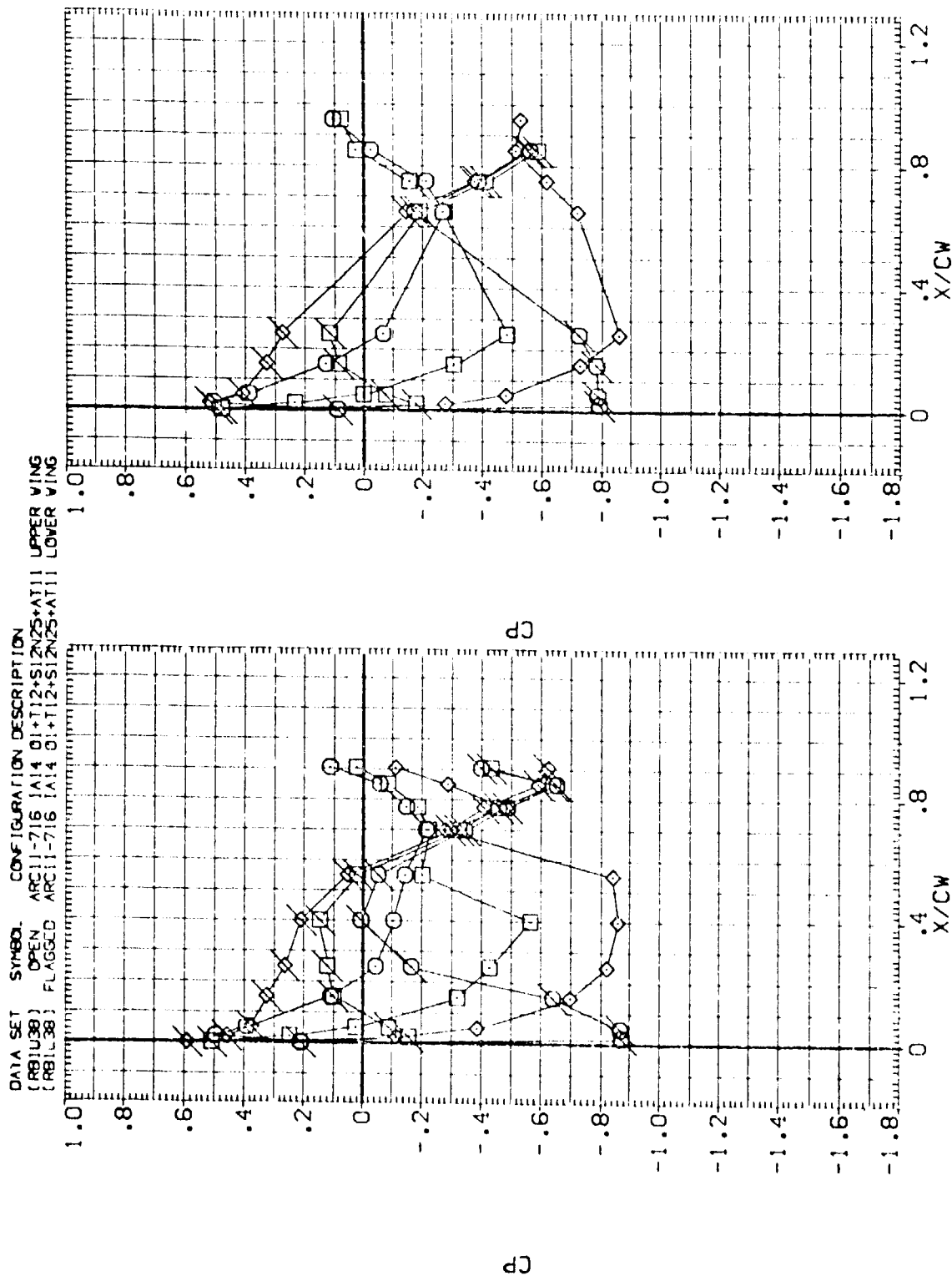
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA Y/BV BETAG MACH RUDDER PARAMETRIC VALUES
 -8.09C .427 .030 1.050 ELEVCH .000
 -1.310 .534 .000 SPDRBK .000
 7.930



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.080	.673	.030	RUDDER	1.050 ELEVON .000
□	-3.10	.780			.000 SPEED .000
◇	7.930				

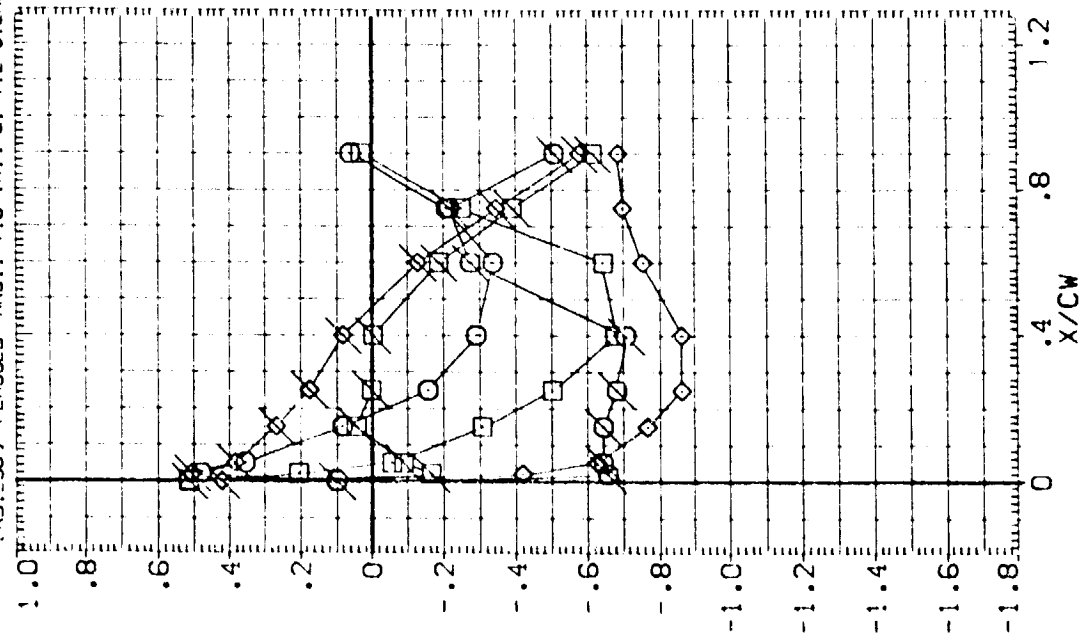


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.050
 RUDDER .000
 ELEVON .000
 SPOILER .000

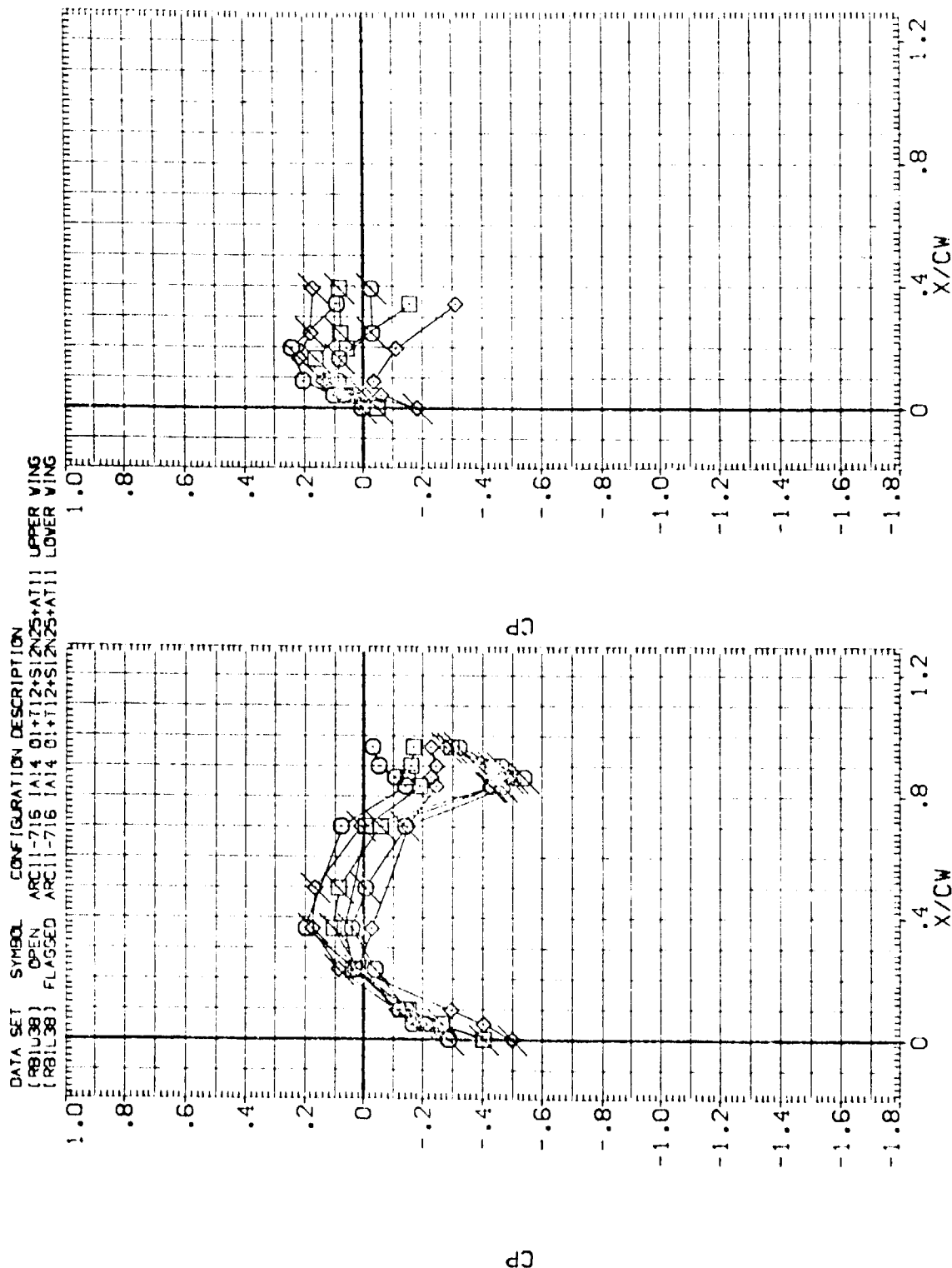
SYMBOL ALPHA0 Y/BV BETA0
 O -8.080 .887 .030
 [] -.310
 ◇ 7.930

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R91U38) OPEN ARC11-716 [A14 01+T112+S12N25+AT11] UPPER WING
 (R91L38) FLAGGED ARC11-716 [A14 01+T112+S12N25+AT11] LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

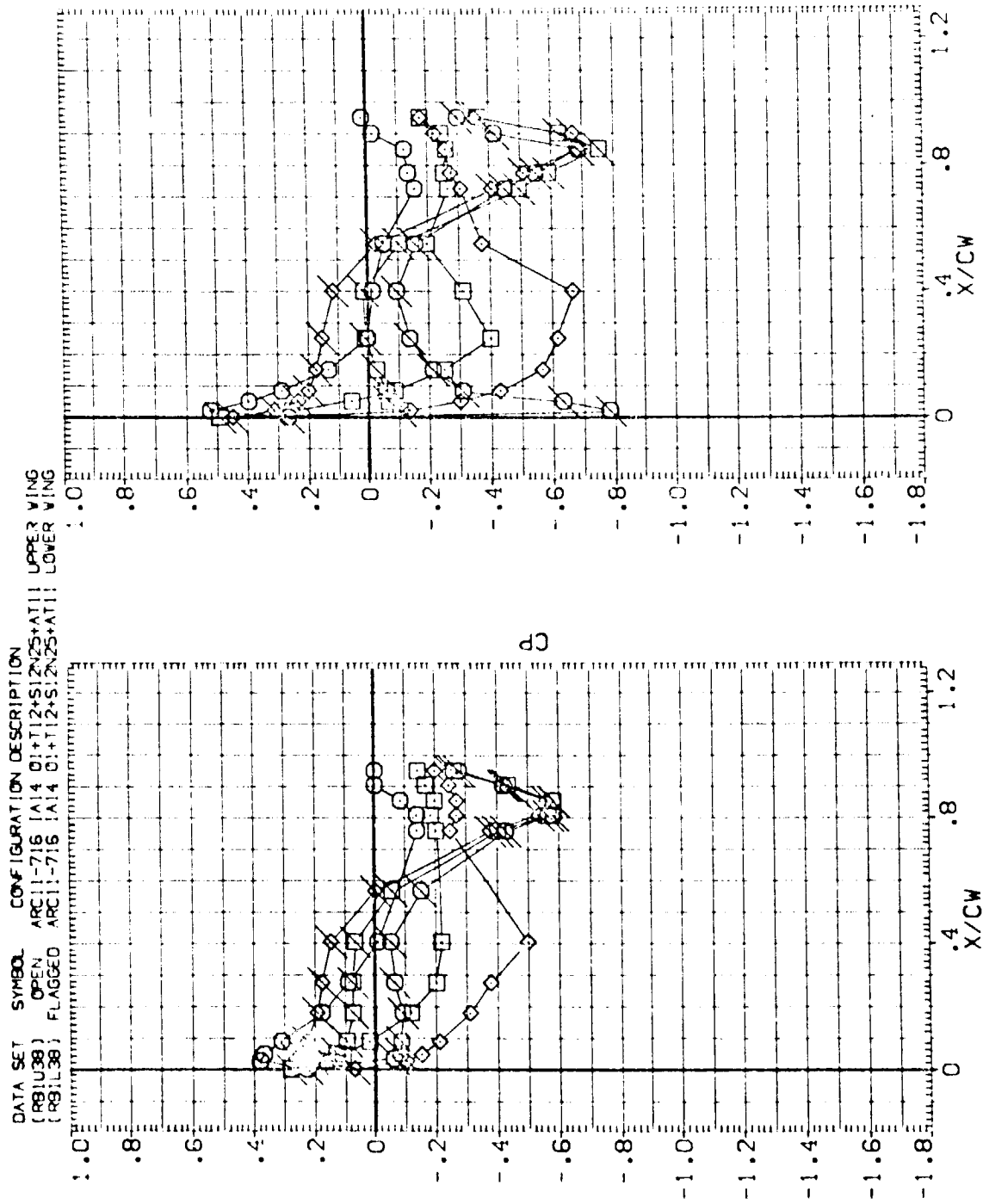
SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.080	.299	4.120	RUDDER	1.050 ELEVON .000
□	-3.10	.364			.000 SPOBRK .000
◇	7.930				



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

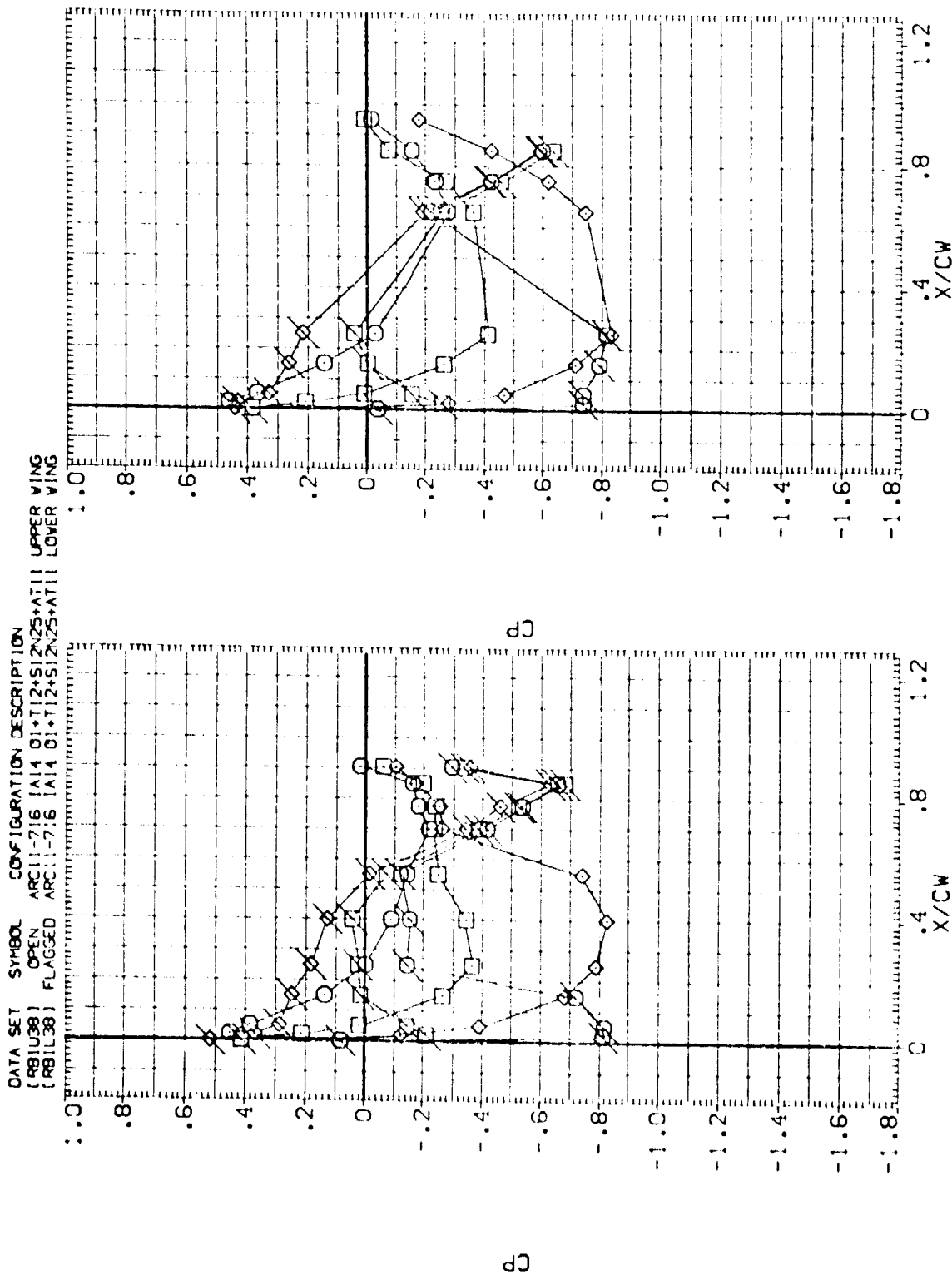
PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 RUDDER .000

ALPHA 8.080
 Y/BV .427
 BETA 4.120
 .534
 7.930



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.080	.573	4.120	RUDDER	1.050 ELEVON .000
□	-3.310	.780			.000 SPOBRK .000
◇	7.930				

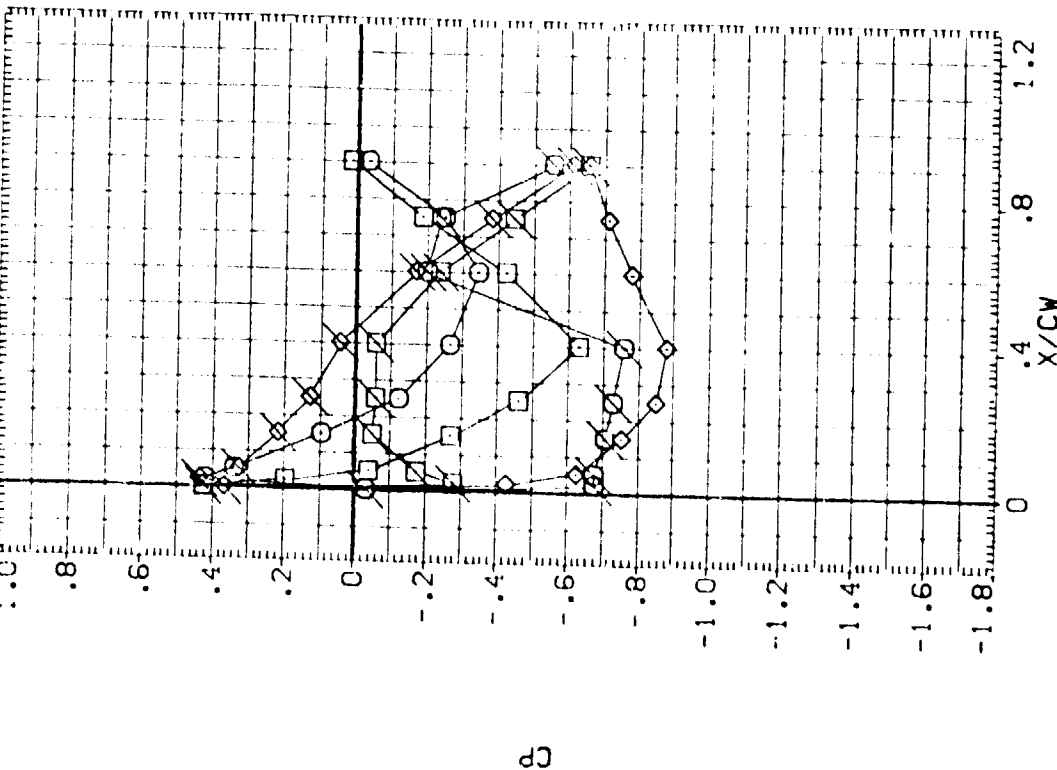


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA0 Y/BV BETA0
 -8.080 .887 4.120
 -3.10
 7.930

PARAMETRIC VALUES
 MACH .050
 RUDDER .000
 ELEVON .000
 SPOBRK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R8) (U38) OPEN ARC: -7/16 [A] 4 0 [I] 2 [S] 2 [Z] 5 + AT [I] UPPER WING
 (R8) (L38) FLAGGED ARC: -7/16 [A] 4 0 [I] 2 [S] 2 [Z] 5 + AT [I] LOWER WING

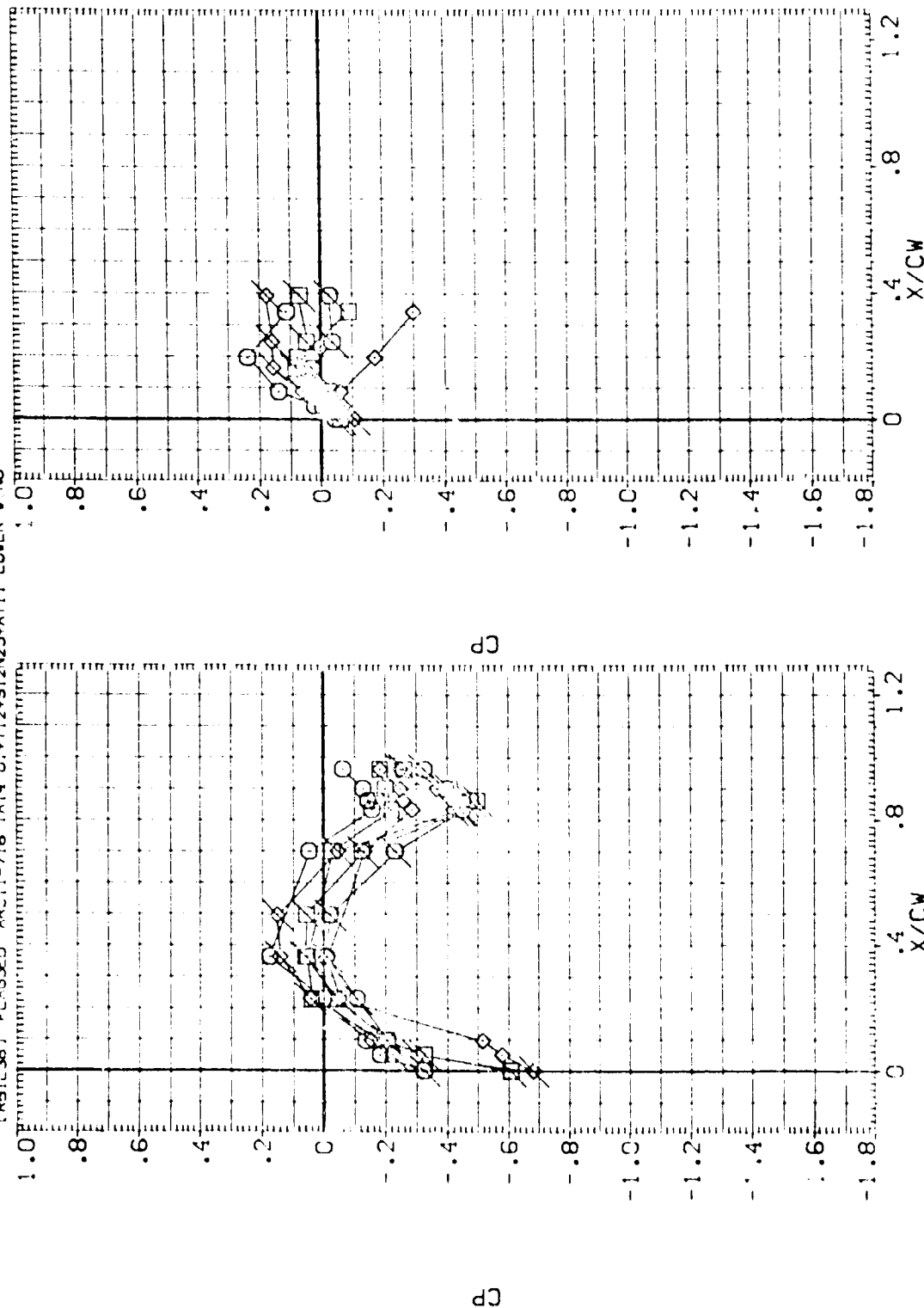


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 RUDDER .000 SPOILER .000

SYMBOL ALPHA-0 BETA-0
 -8.080 .299 8.160
 -3.10 .364
 7.930

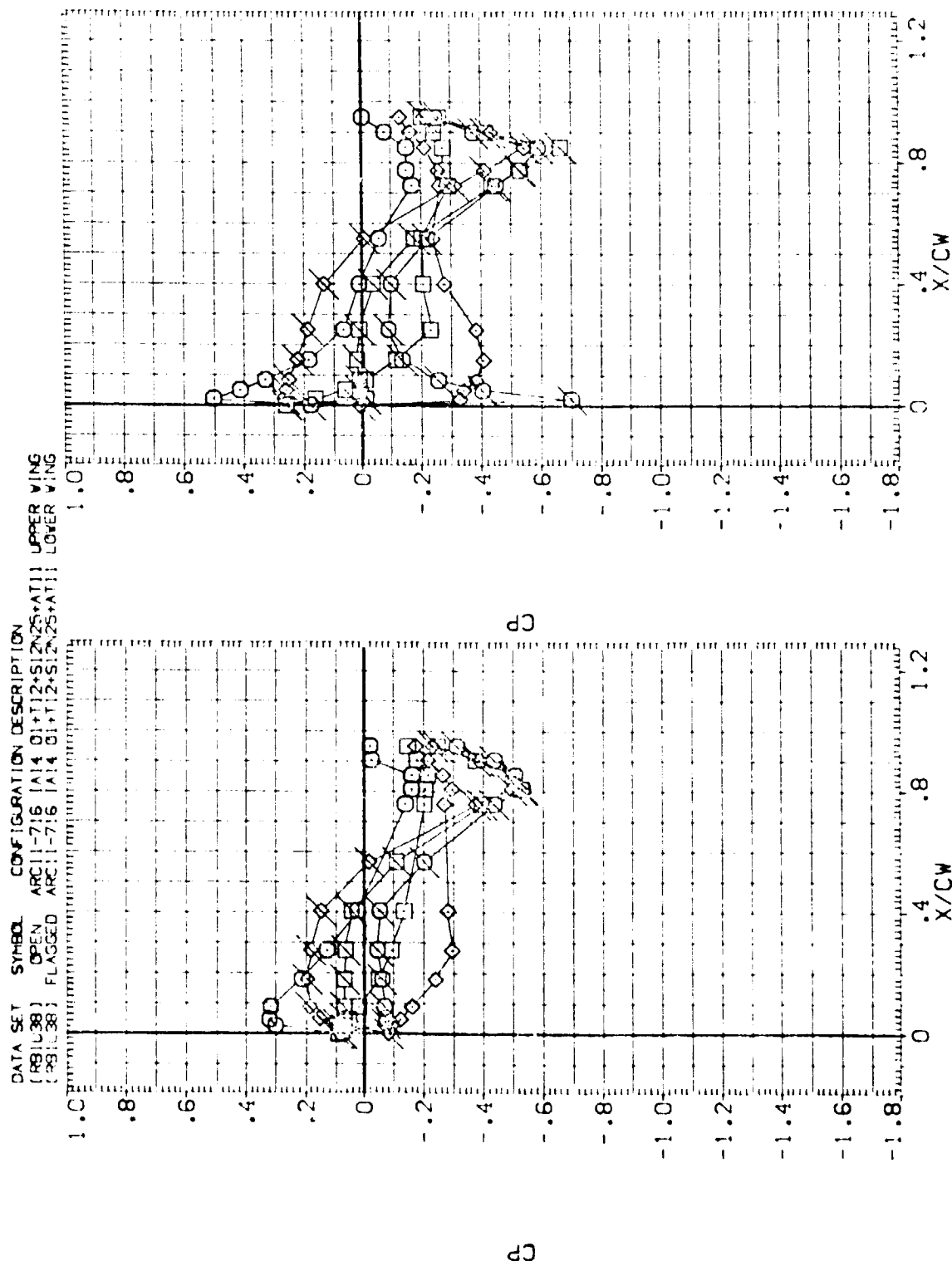
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R31L38) OPEN ARC11-716 [A14 0] T12+S12N25+AT11 UPPER WING
 (R31L38) FLAGGED ARC11-716 [A14 0] T12+S12N25+AT11 LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
MACH 1.050
ELEVON .000
RUDDER .000
SPOILER .000

SYMBOL ALPHA₀ Y/B₀ BETA₀
○ -8.080 .427 8.160
□ -3.310 .534
◇ 7.930



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL

ALPHA-0
-8.090
-3.10
7.970

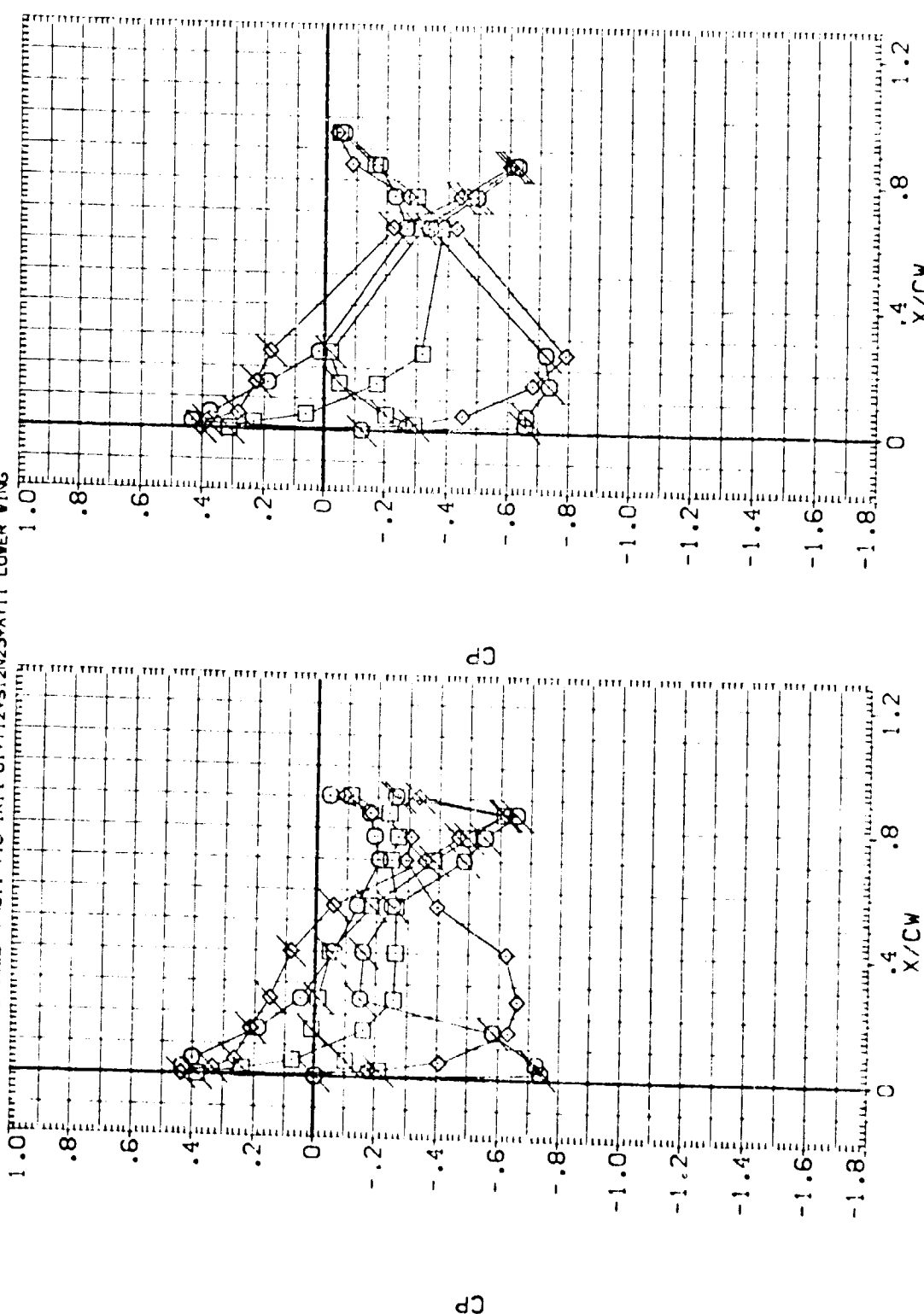
Y/BV
.673
.780

BETA-0
8.160

MACH
1.050
1.000

PARAMETRIC VALUES
ELEVON
SPDRK
.000
.000

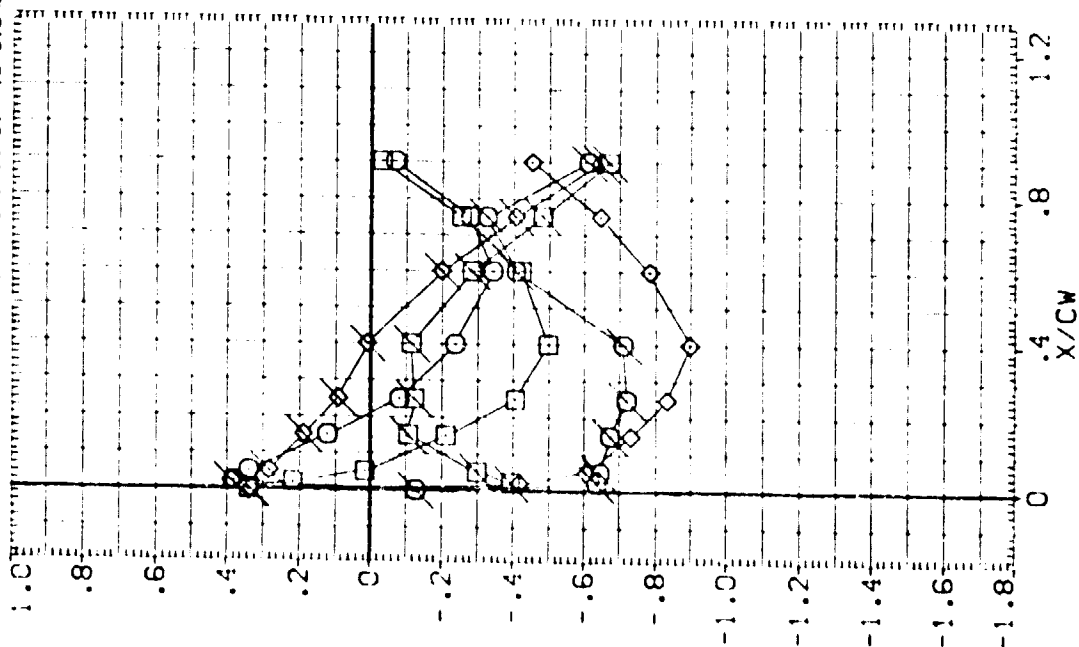
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R81U38) OPEN ARC11-716 [A14 01+112+512N25+AT11] UPPER WING
(R81L38) FLAGGED ARC11-716 [A14 01+112+512N25+AT11] LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

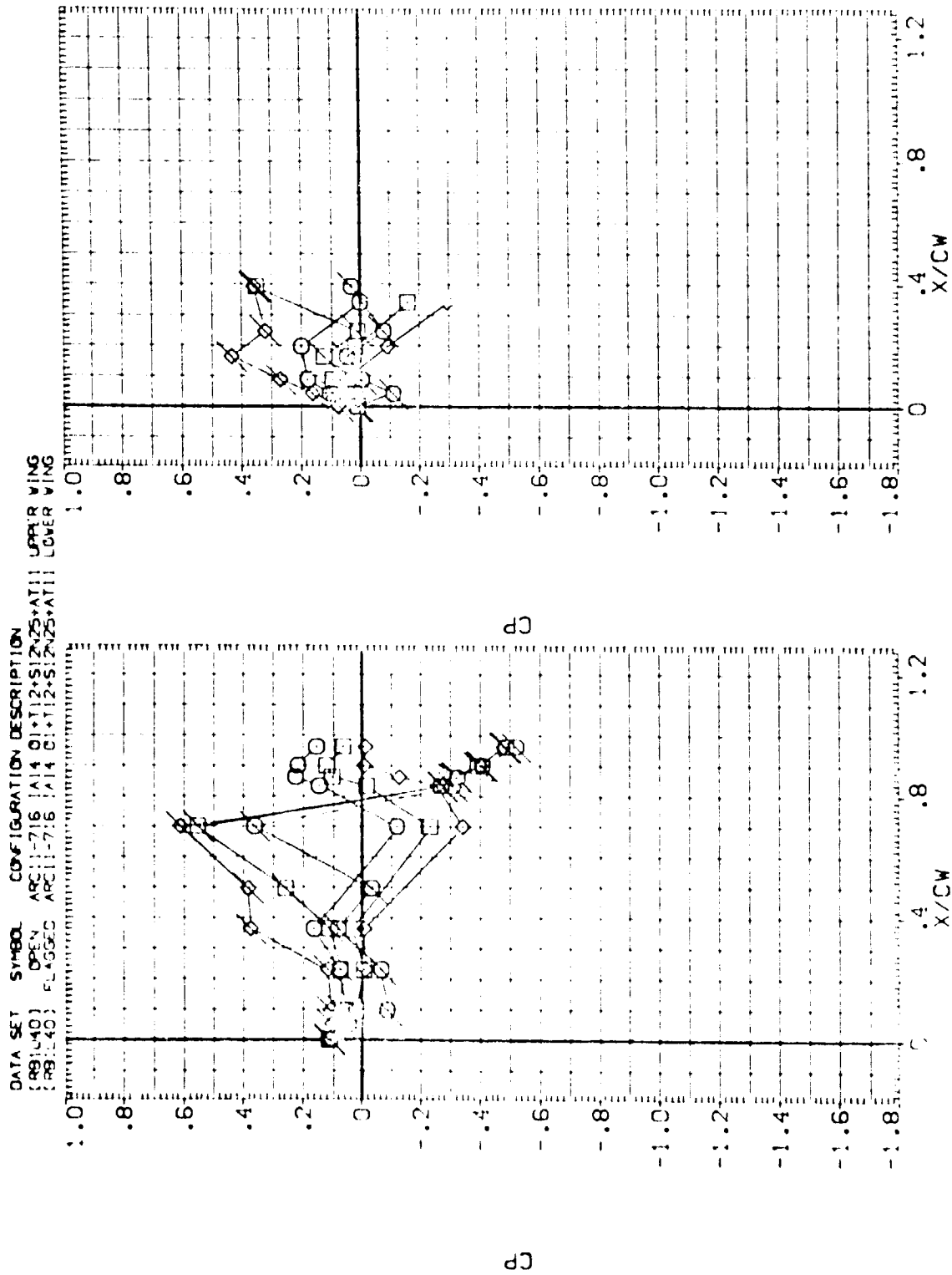
SYMBOL ALPHA Y/B₀ BETA₀
 -8.080 .887 8.160
 -7.310
 -7.930

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81038) OPEN ARC11-716 [A14 01+112+S12+25+AT1] UPPER WING
 (R81038) FLAGGED ARC11-716 [A14 01+112+S12+25+AT1] LOWER WING



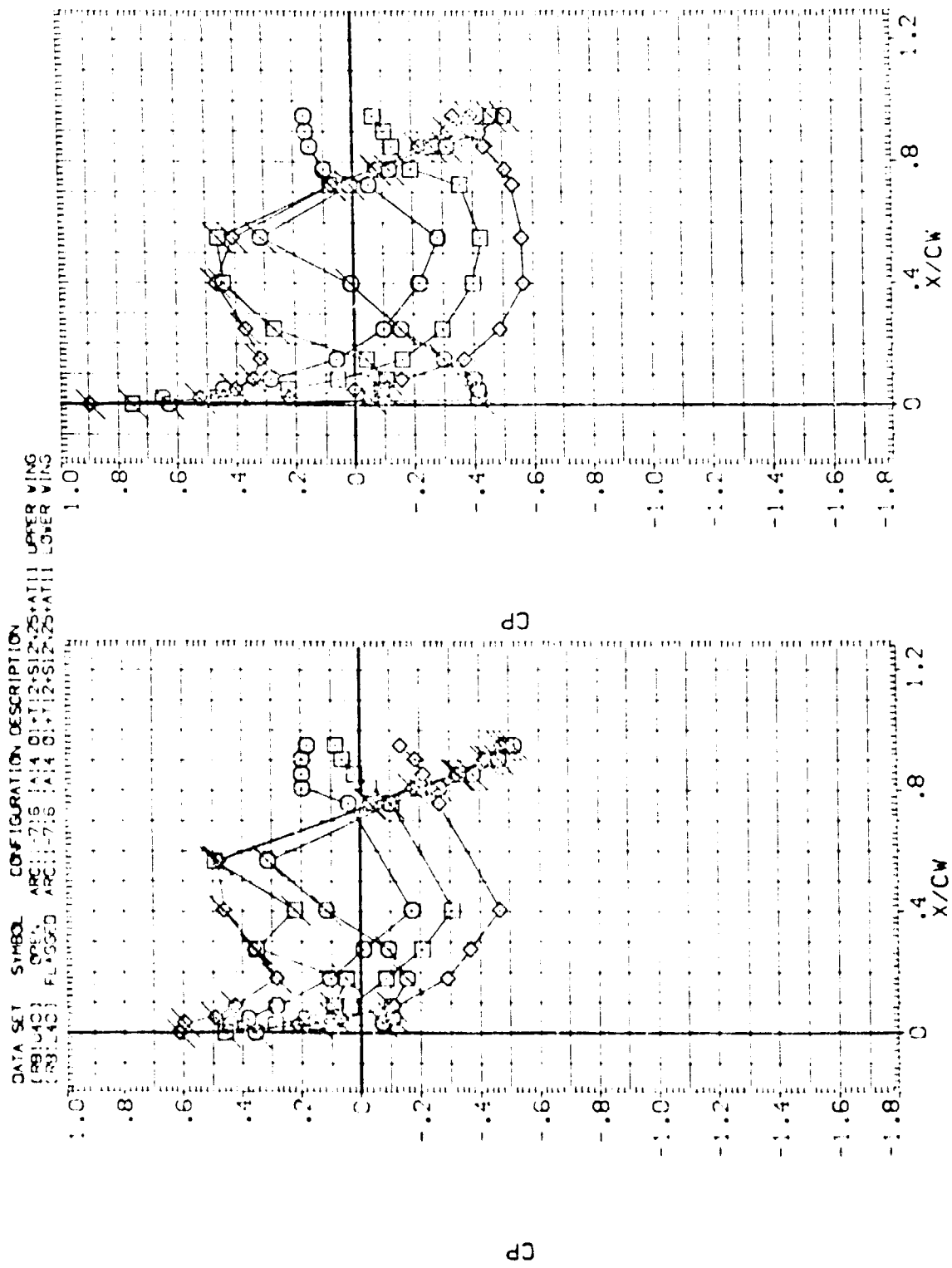
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES	
	-7.920	.299	-8.040		1.400	ELEVON
	-1.370	.364		.000	SPOSRK	.000
	8.000					



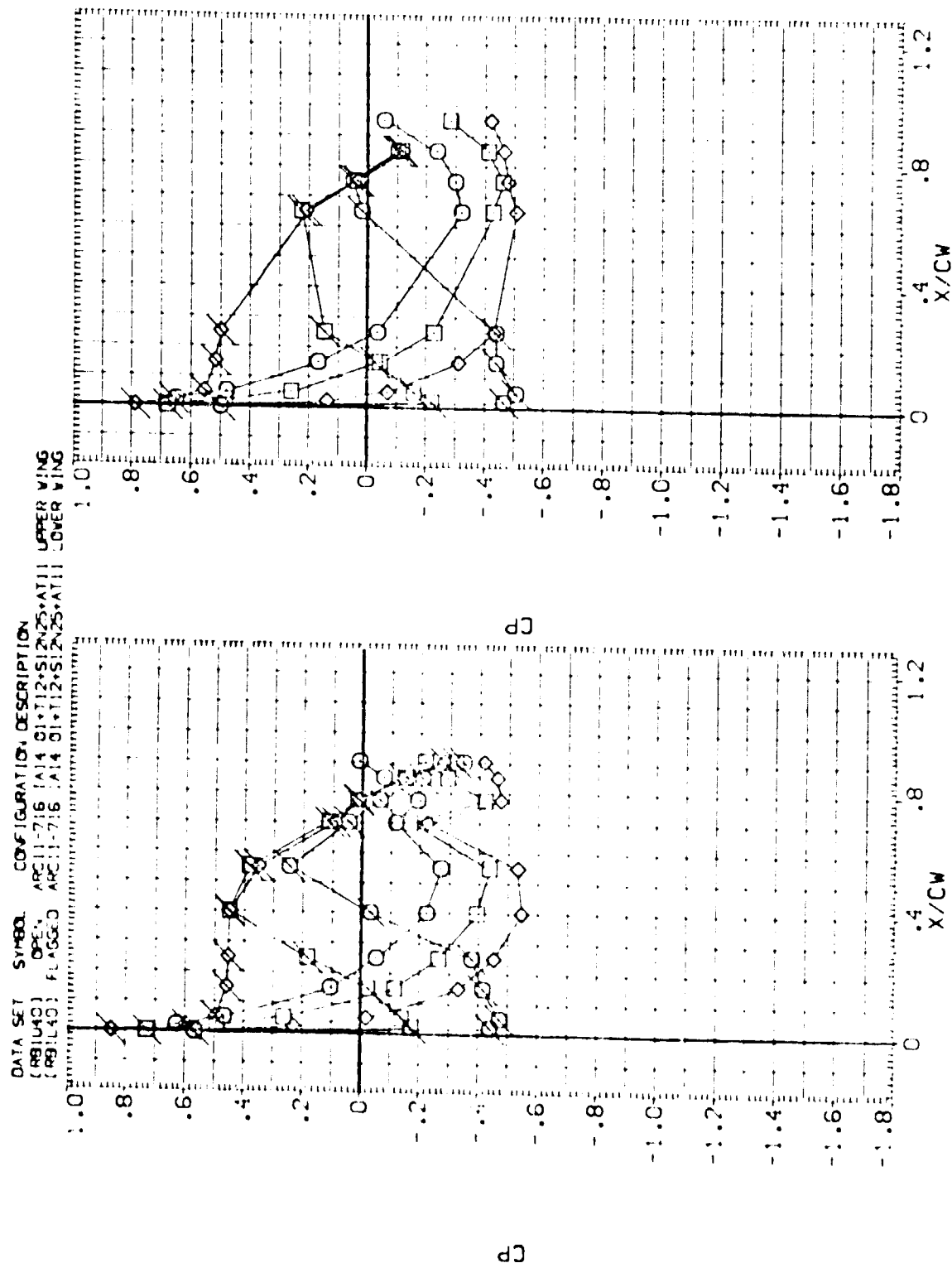
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA0	Y/B0	BETA0	MACH	PARAMETRIC VALUES
○	-7.970	.427	-8.040	RUDDER	1.400 ELEVON
◇	-7.370	.534			1.000 SPOBRN
	8.000				.000



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
	-7.970	.673	-8.040	.000	1.400 ELEV
	-3.370	.780		.000	SP08
	8.000				

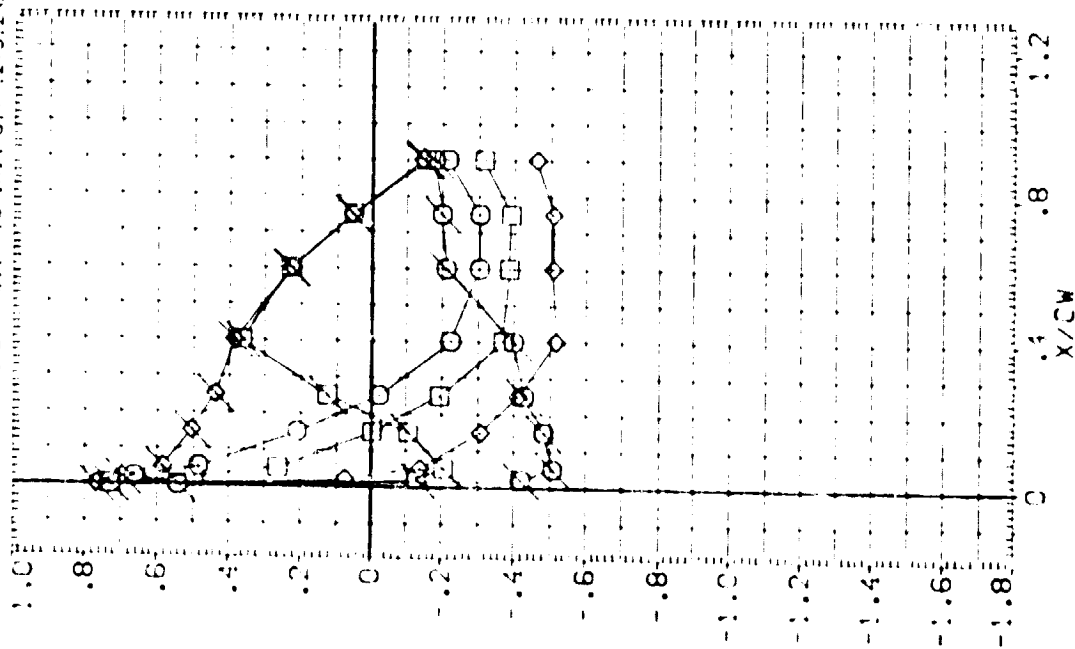


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA0 Y/B₀ BETA0
 ○ 7.920 .687 8.040
 △ 7.370
 ◇ 8.000

MACH
 RUDDER
 PARAMETRIC VALUES
 1.400 .000
 ELEVON .000
 SPOILER .000

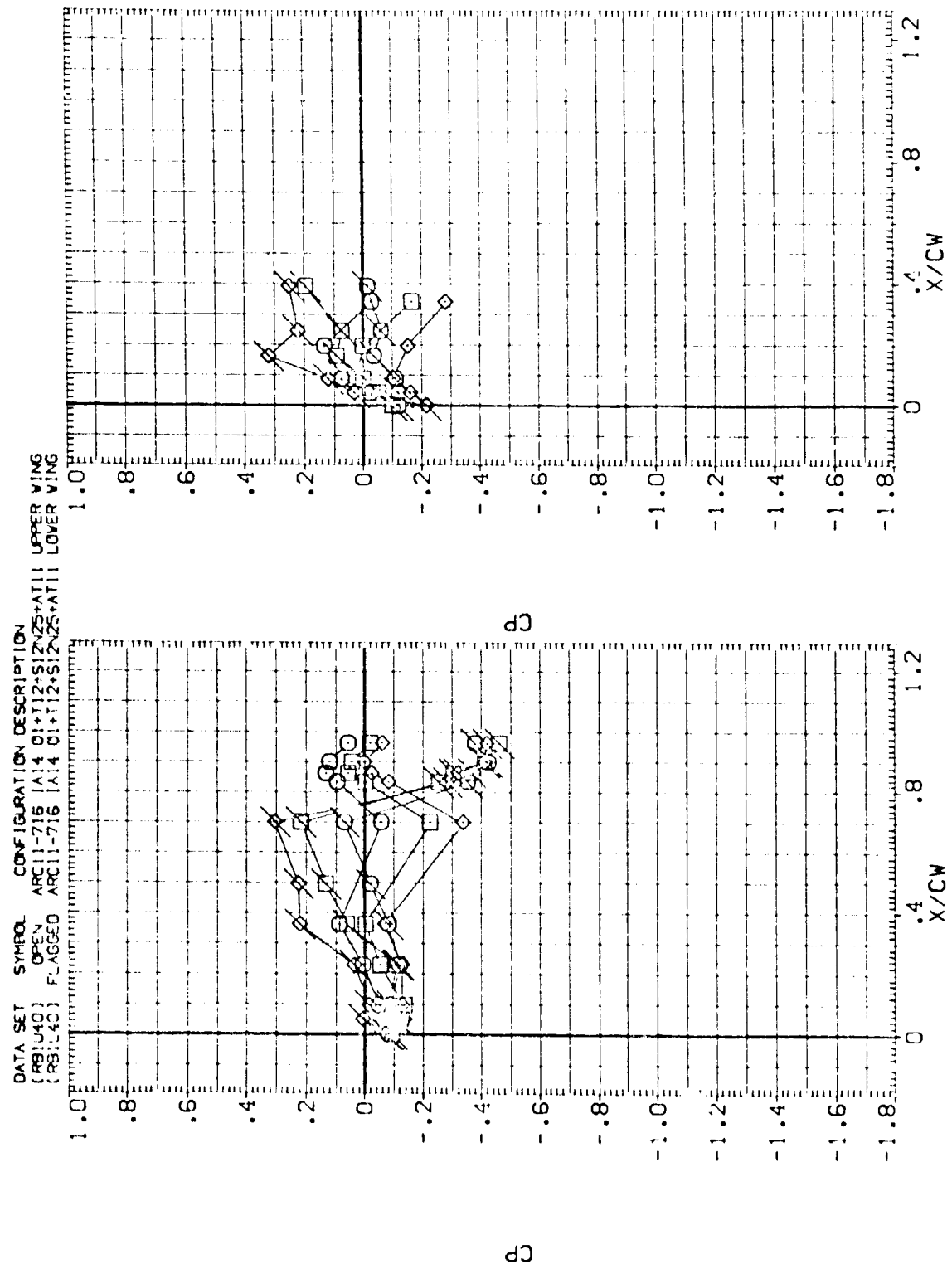
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R91040) ○ 7.920 1A14 01+12+25+AT11 UPPER WING
 (R91040) △ 7.370 1A14 01+12+25+AT11 LOWER WING



CHORDWISE DISTRIBUTION C_p UPPER AND LOWER SURFACE WING PRESSURES

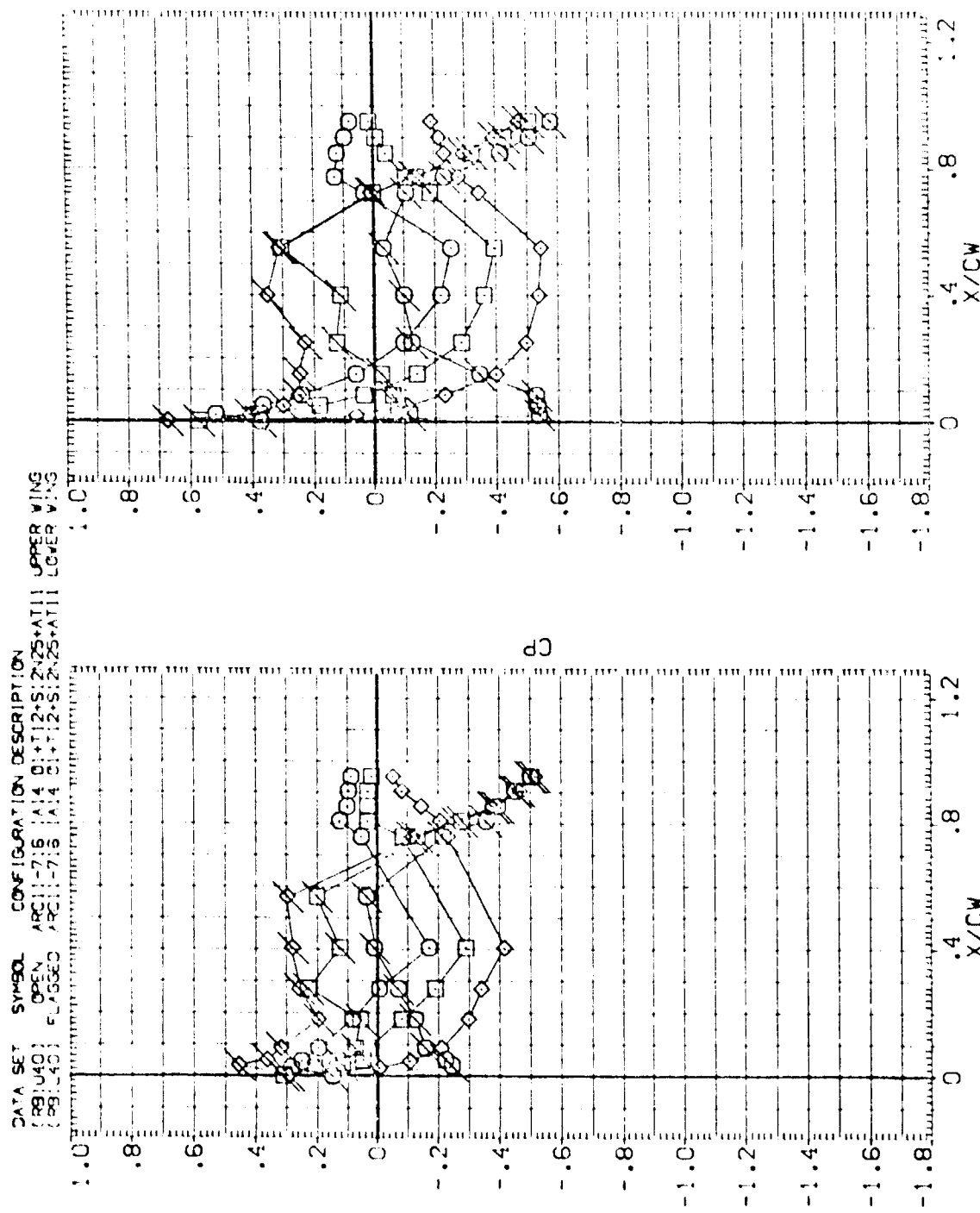
PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPEED%K .000

ALPHA0 -7.920
 -1.370
 8.000
 BETA0 .030
 .299
 .364



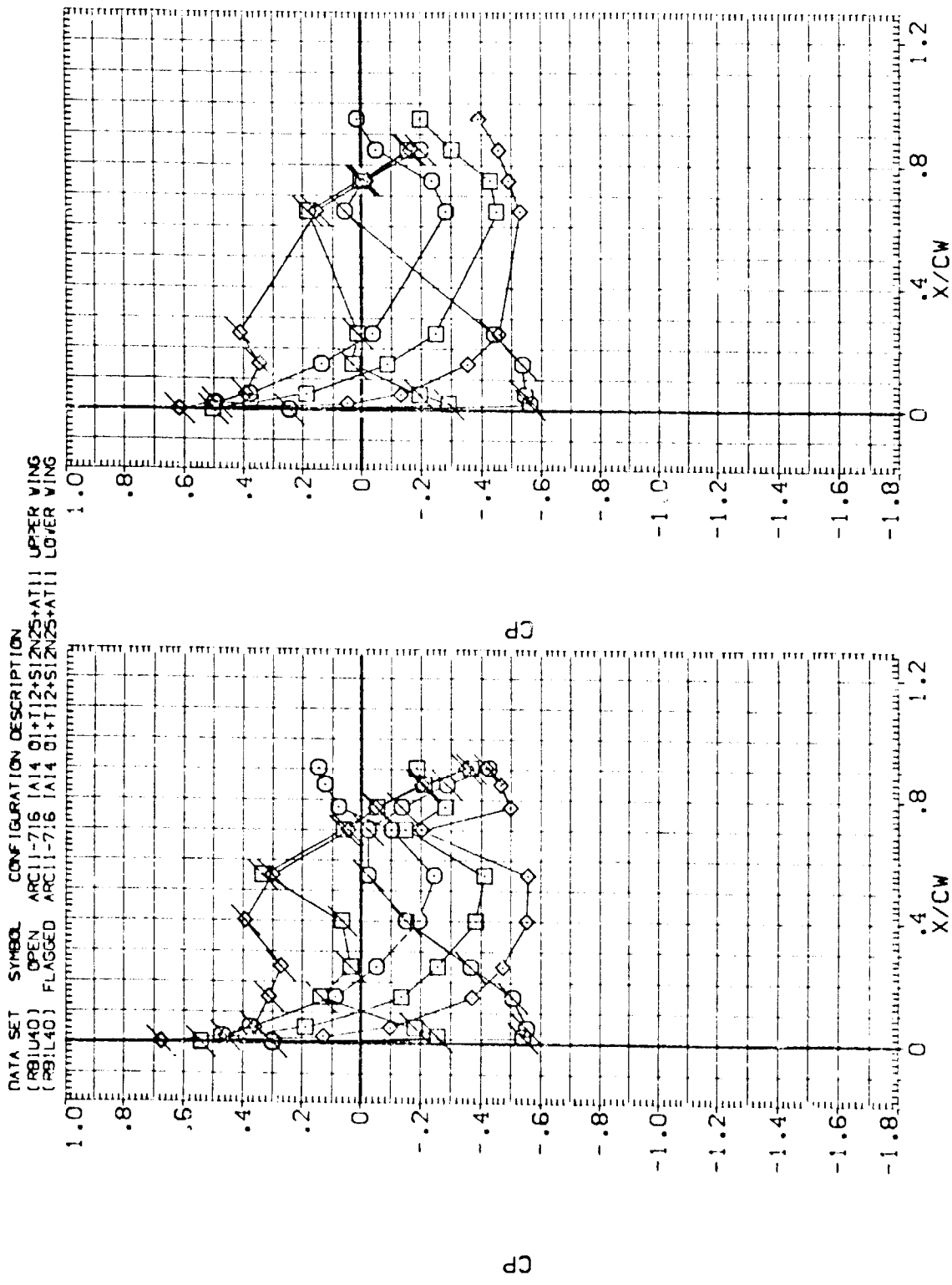
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	BETA	Y/B	PARAMETRIC VALUES
○	-7.920	.030	.427	MACH 1.400 ELEVON .000
◇	-7.370	.534	.534	FLUDER .000 SPOILER .000
◇	8.000			



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-7.920	.673	.030	RUDDER	1.400
□	-.370	.780			.000
◇	8.000				.000



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL
O
◇

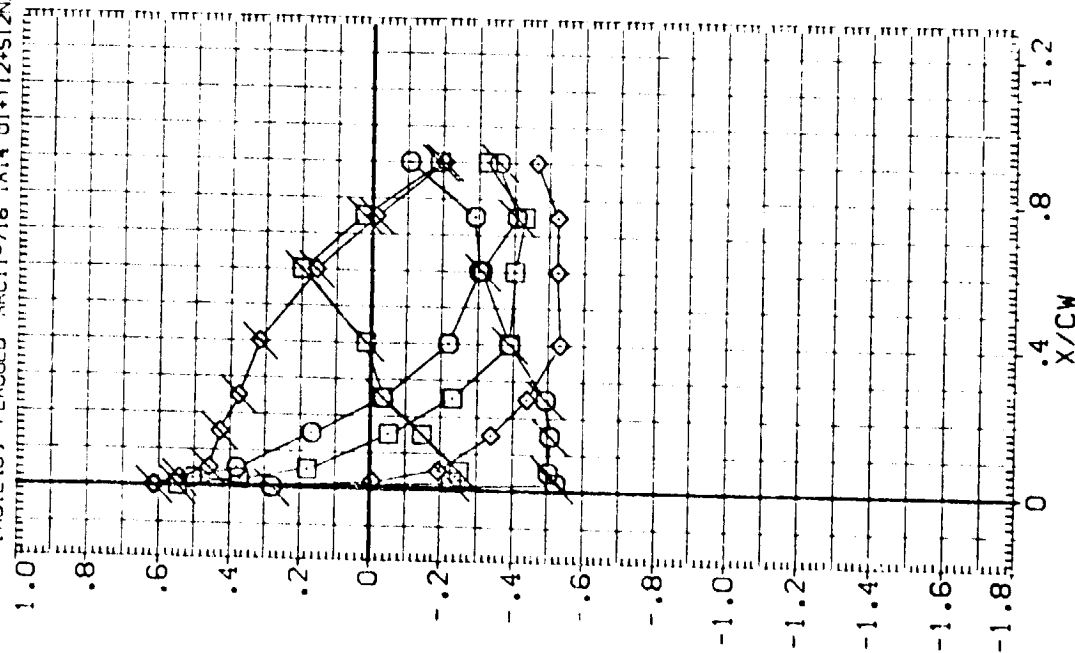
ALPHA
-7.920
-7.370
8.000

Y/BV
.687

BETA
.030

PARAMETRIC VALUES
MACH 1.400
RUDDER .000
ELEVON .000
SPDBRK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RBLU40) OPEN ARC11-716 1A14 01+T12+S12N25+AT11 UPPER WING
(RBLU40) FLAGGED ARC11-716 1A14 01+T12+S12N25+AT11 LOWER WING

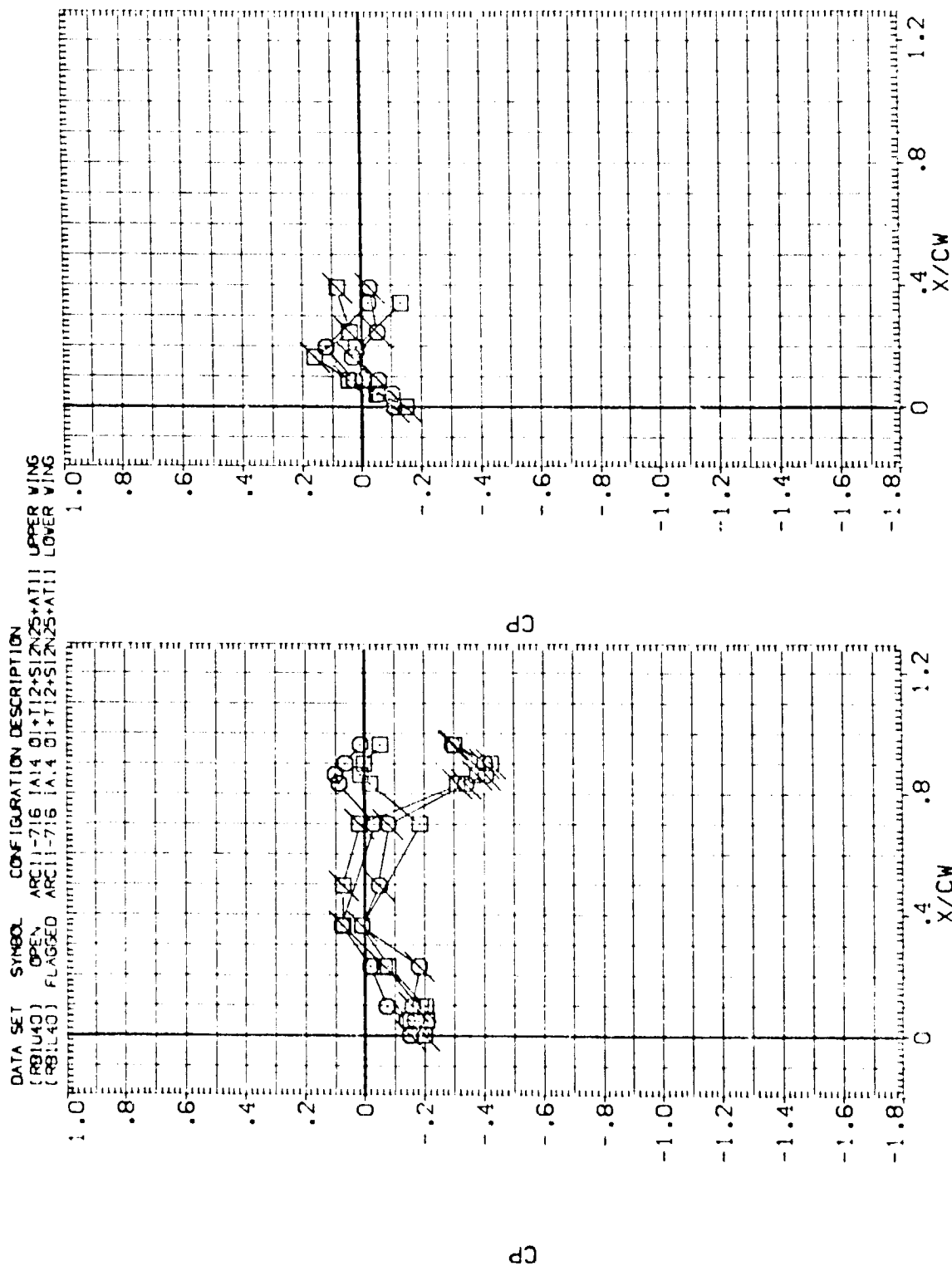


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 1.400 ELEVON .000
 .000 SPDRK

MACH
 RUDDER

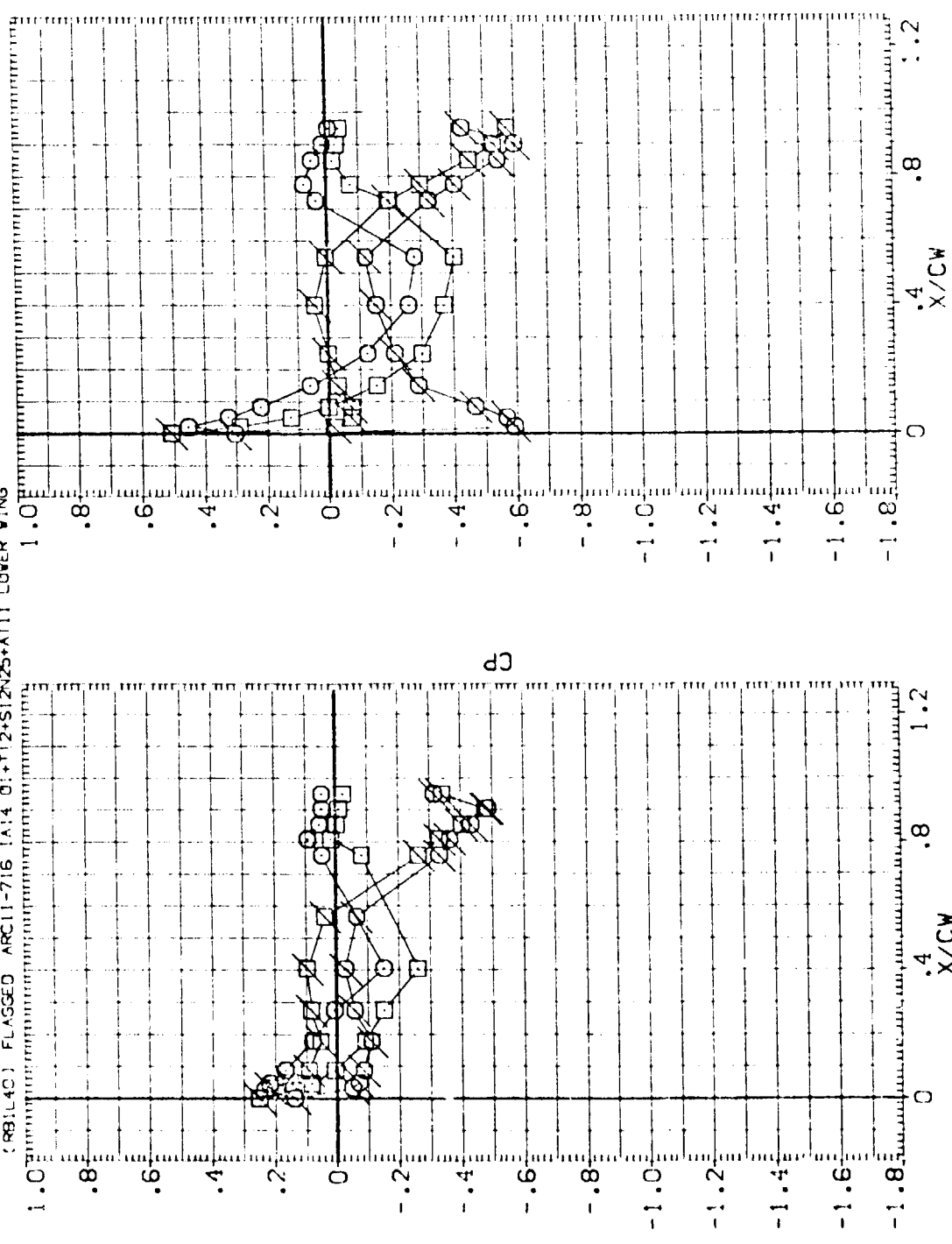
SYMBOL ALPHA0 Y/BV BETA0
 -7.920 .299 4.100
 -3.370 .364



PARAMETRIC VALUES
 MACH 1.400 ELEVON .000
 RUDDER .000

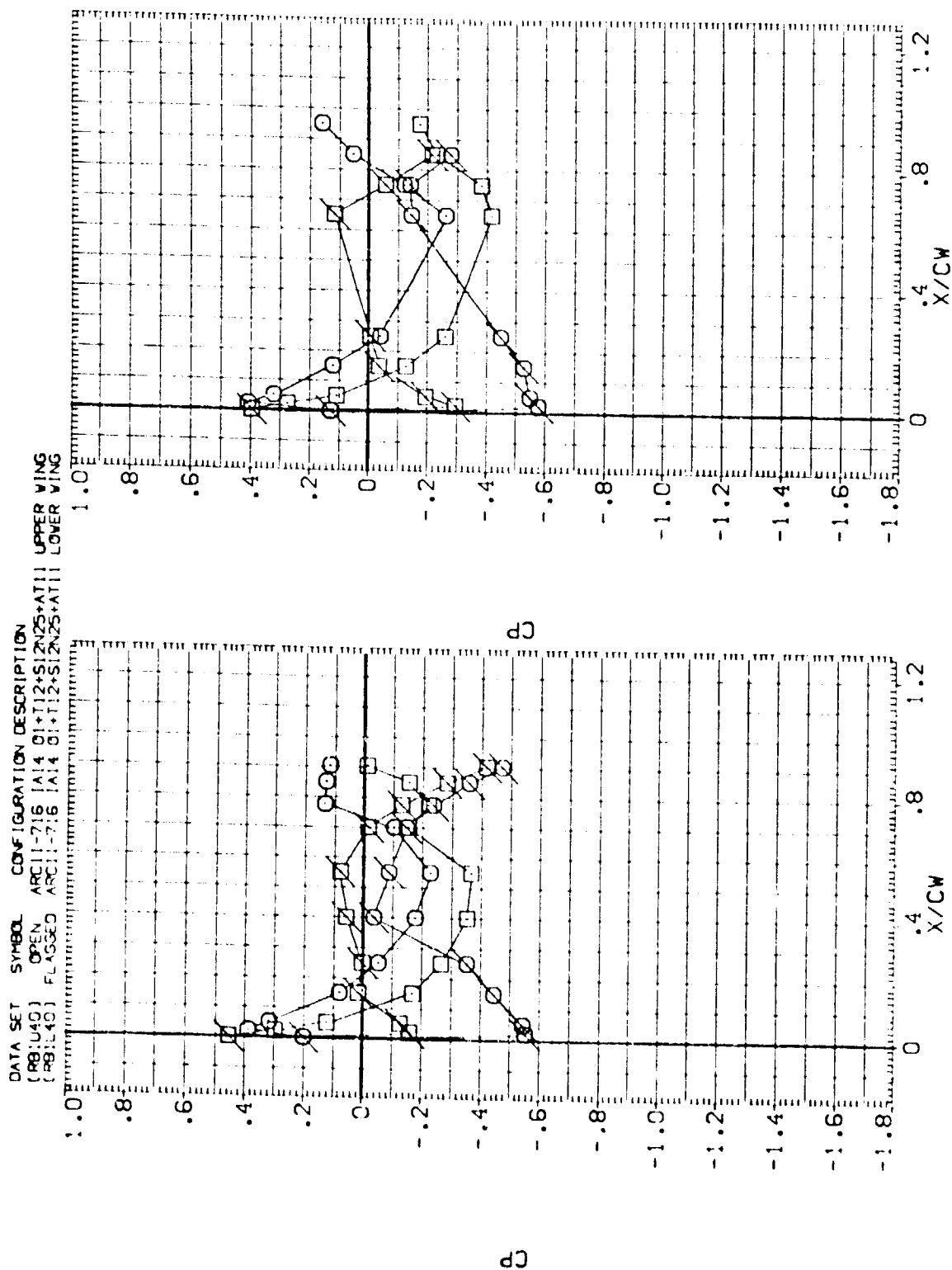
SYMBOL ALPHA Y/BV BETA
 -7.920 .427 4.100
 -3.370 .534

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R91U40) OPEN ARC11-716 [A14 01+12+5]2N25+AT11 UPPER WING
 (R81L40) FLAGGED ARC11-716 [A14 01+12+5]2N25+AT11 LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-7.920	.673	4.100	RUDDER	1.400 ELEVON .000
□	-3.370	.780			.000 SPDBRK .000

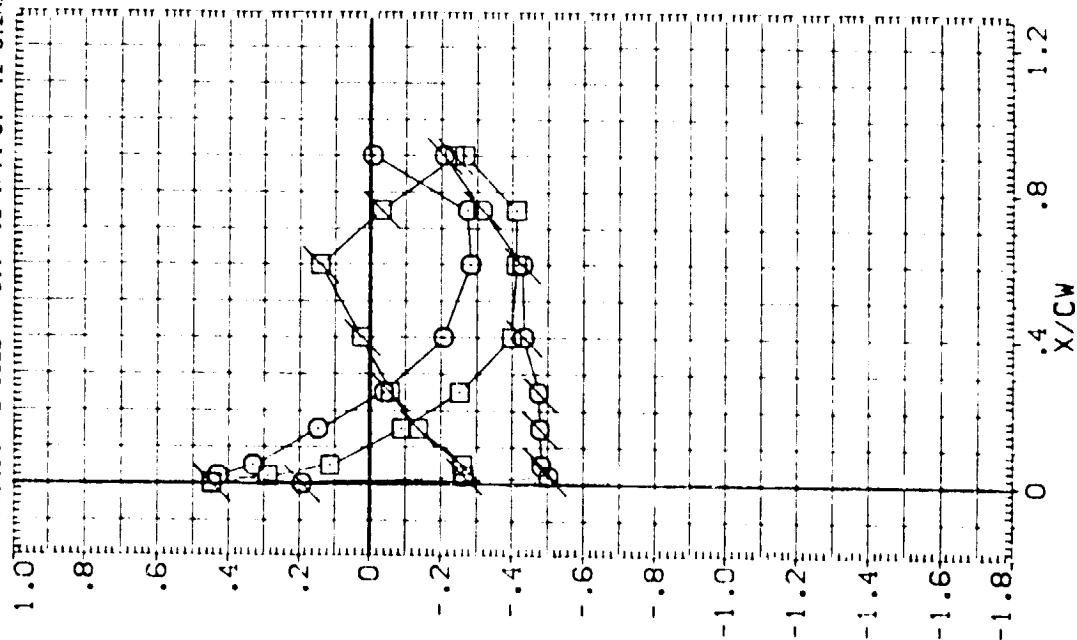


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

PARAMETRIC VALUES
 MACH 1.400 ELEVON .000
 RUDDER .000 SPOBRK .000

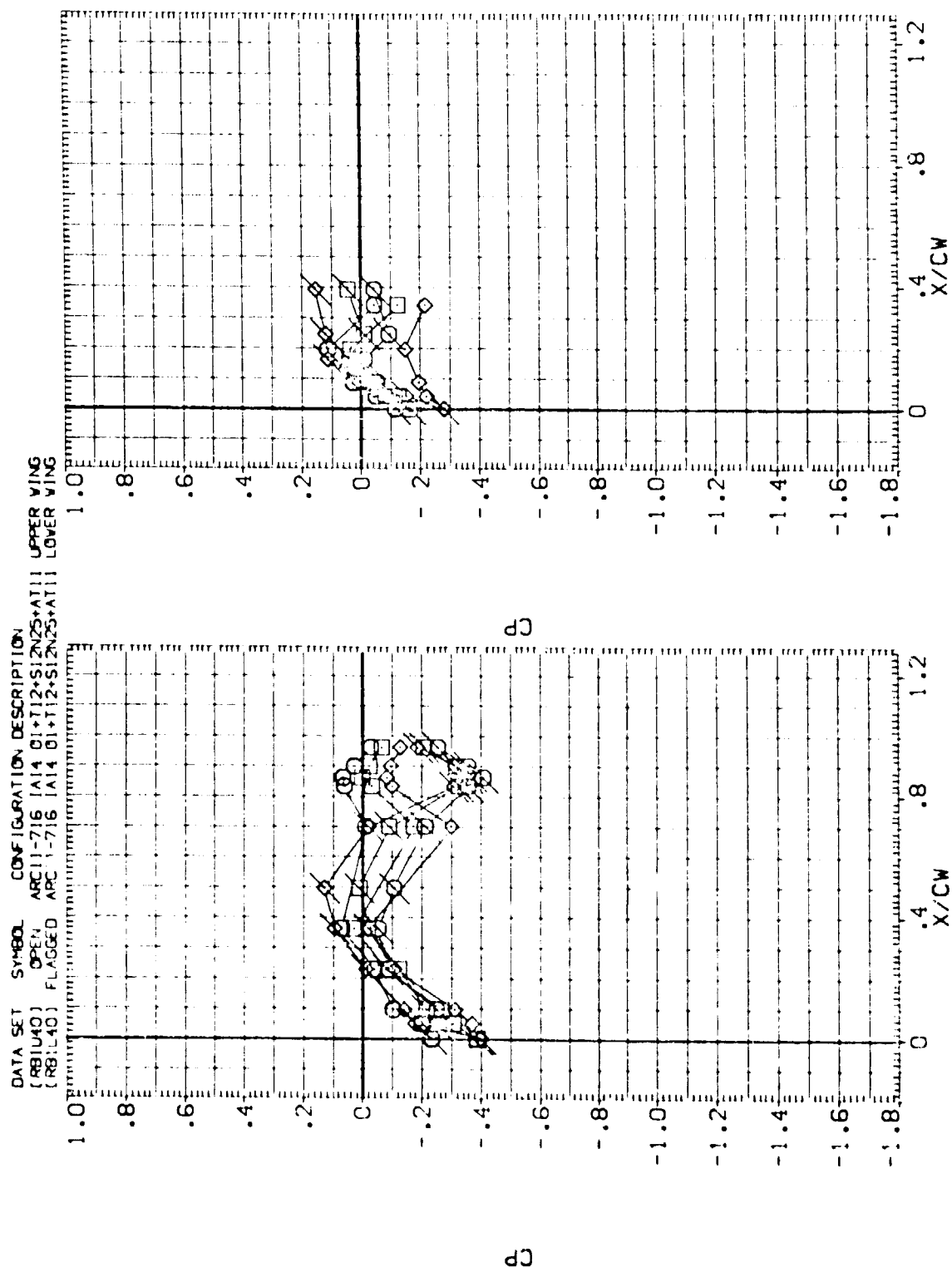
SYMBOL ALPHA Y/BV BETAD
 -7.920 .887 4.100
 -370

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R01U40) OPEN ARC11-716 [A14 01+112+S12N25+AT1] UPPER WING
 (R01L40) FLAGGED ARC11-716 [A14 01+112+S12N25+AT1] LOWER WING



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

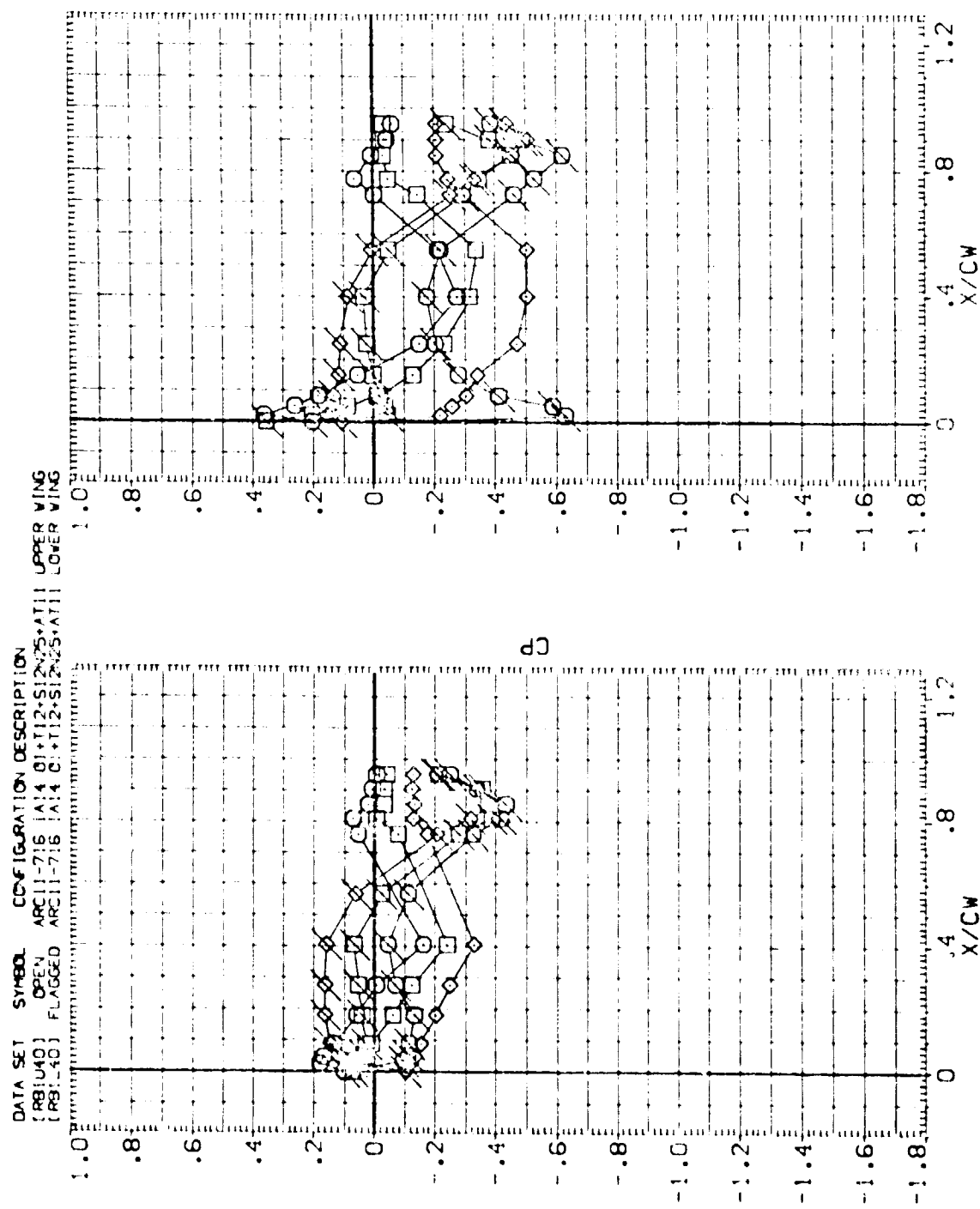
SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-7.920	.299	8.190	RUDDER	1.400 ELEVON
□	-.370	.364			.000 SPOILER
◇	8.000				.000



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

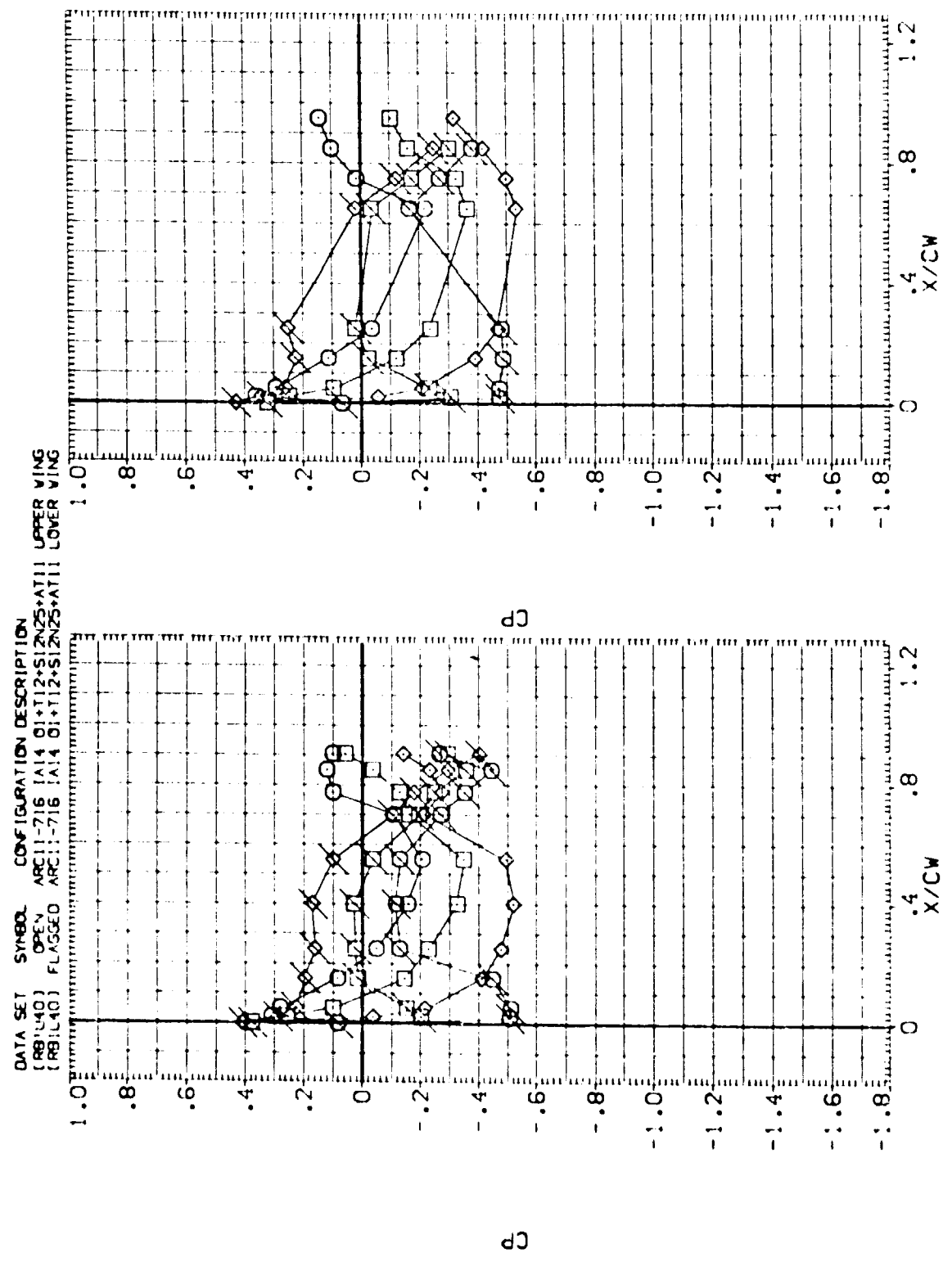
PARAMETRIC VALUES
 MACH 1.400 ELEVON .000
 RUDDER .000 SPOILER .000

SYMBOL ALPHA0 Y/BV BETA0
 -7.920 .427 8.190
 -3.370 .534
 8.000



CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL	ALPHA	Y/BV	BETA	MACH	PARAMETRIC VALUES
○	-7.920	.673	8.190	RUDDER	1.400 ELEVON
□	-1.370	.780			.000 SPOILER
◇	8.000				

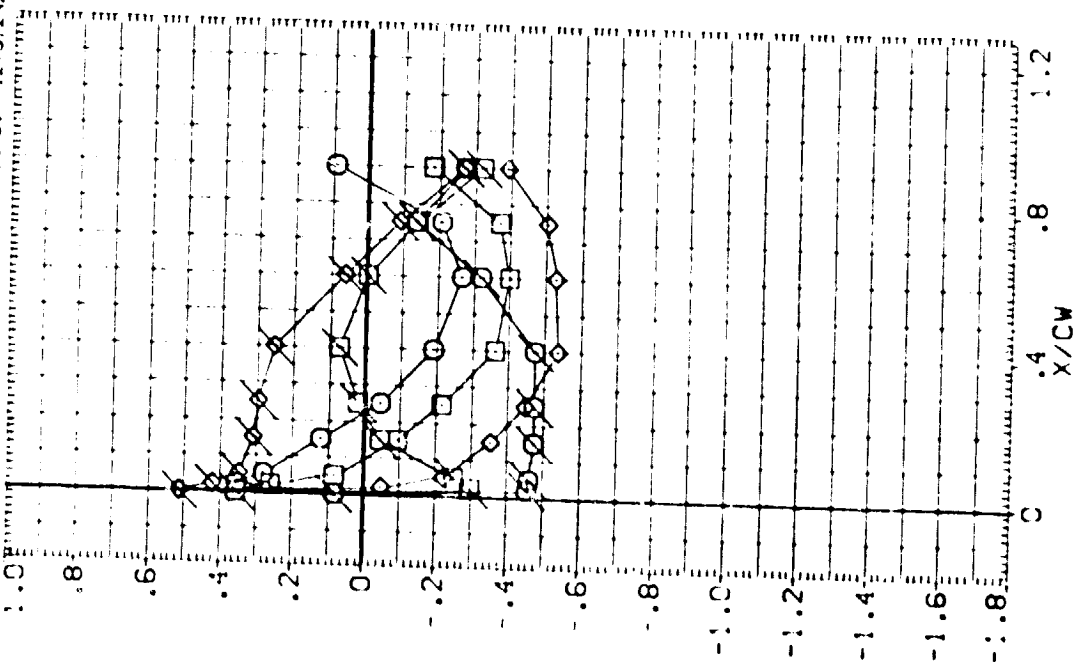


CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA Y/BV BETA
 -7.92C
 -1.37C
 8.00C

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOON .000

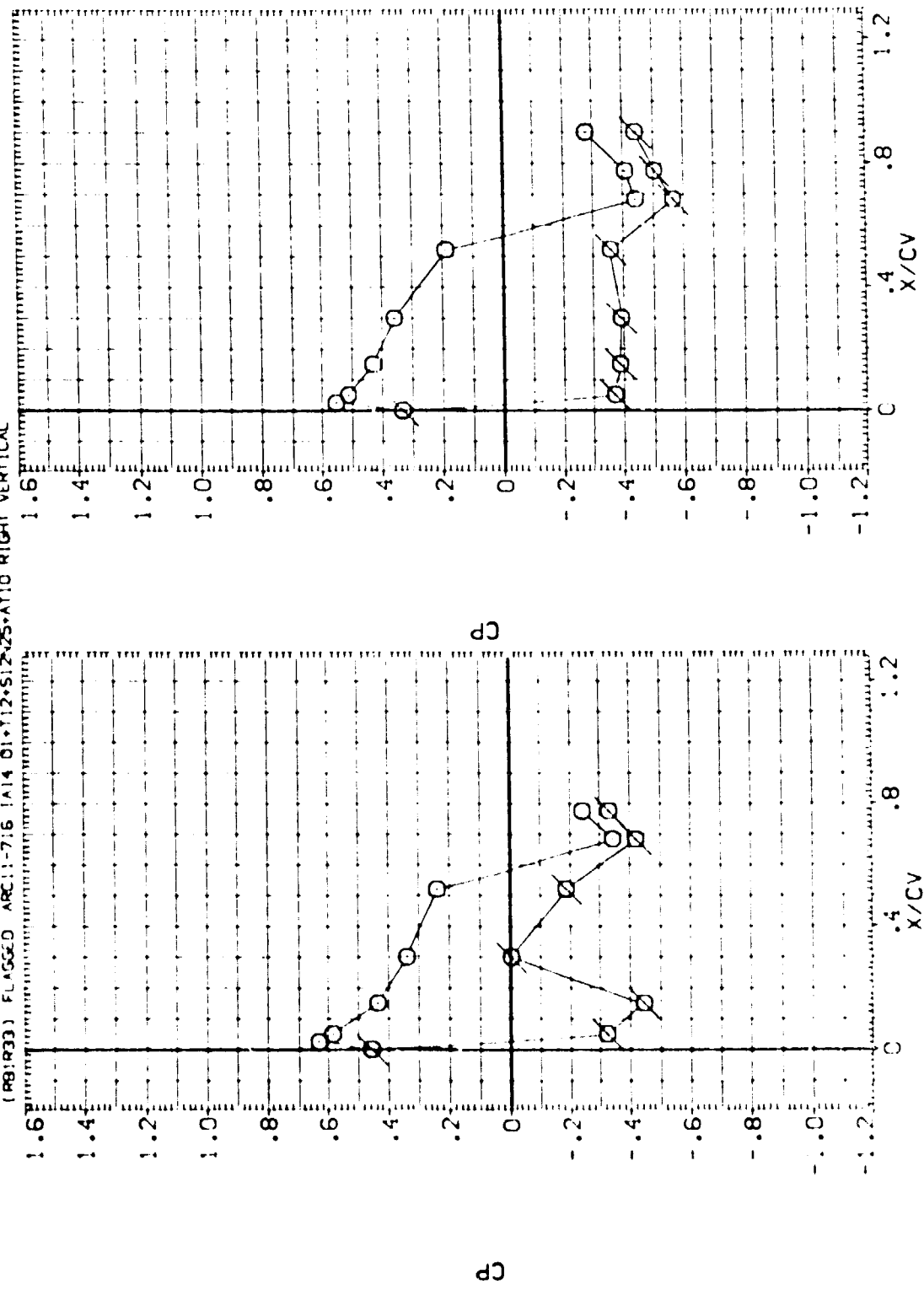
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R) (U) (O) OPEN ARC 11-716 1A14 01-712-25-AT11 UPPER WING
 (R) (U) (O) FLAGGED ARC 11-716 1A14 01-712-25-AT11 LOWER WING



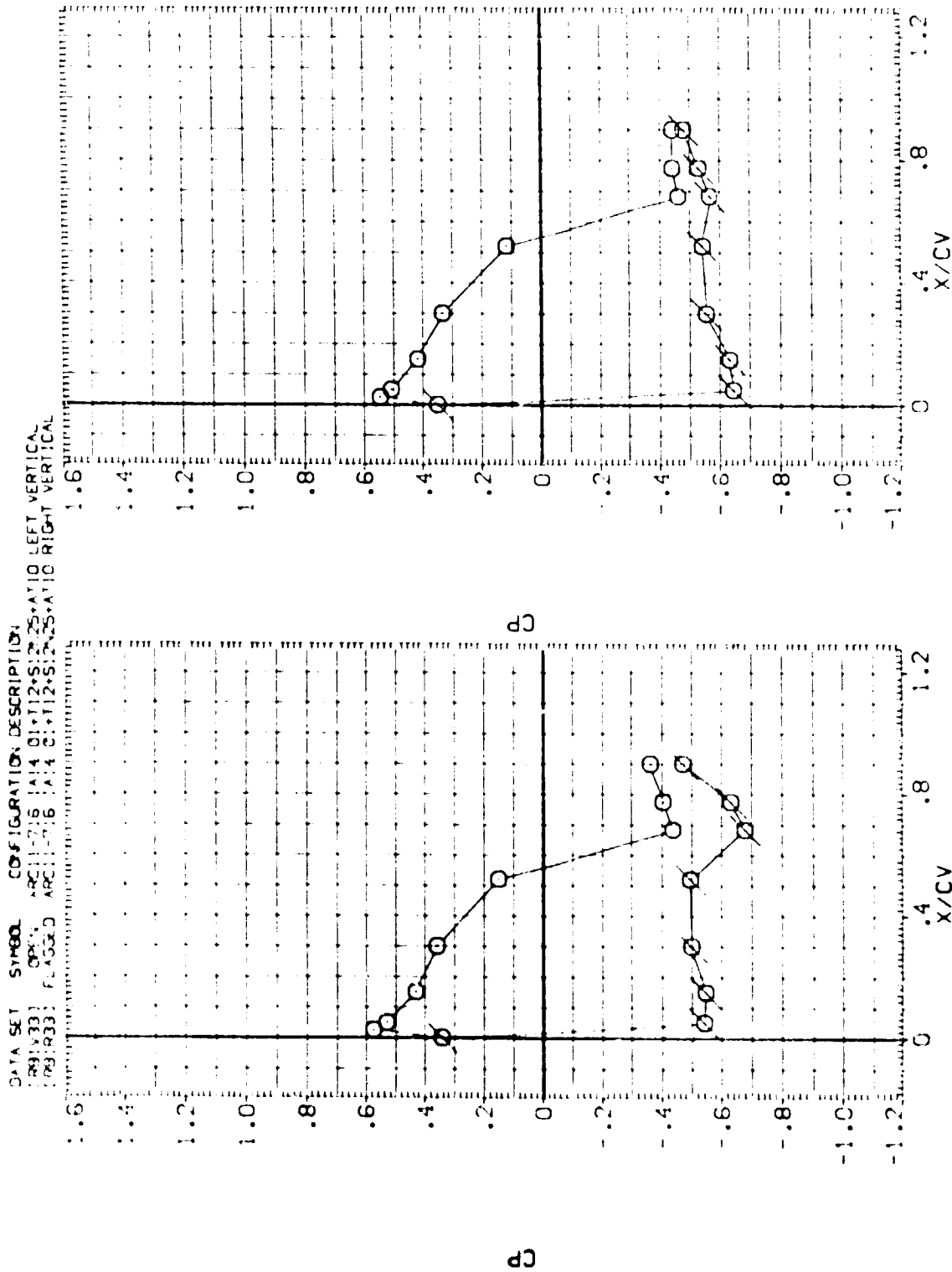
CHORDWISE DISTRIBUTION OF UPPER AND LOWER SURFACE WING PRESSURES

SYMBOL ALPHA Z/BY BETA0
 O -1.760 .158 -8.420
 .316

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81V33) OPEN ARC11-716 [A14 01-112-S12-25-AT10 LEFT VERTICAL
 (R81R33) FLAGGED ARC11-716 [A14 01-112-S12-25-AT10 RIGHT VERTICAL



S1480 ALPAC 2.34 BETAC -8.420
 0 .760 .600 .040
 MACH RUDDER
 PARAMETRIC VALUES
 1.250 ELEV 0.000
 1.000 SPEED 1.000

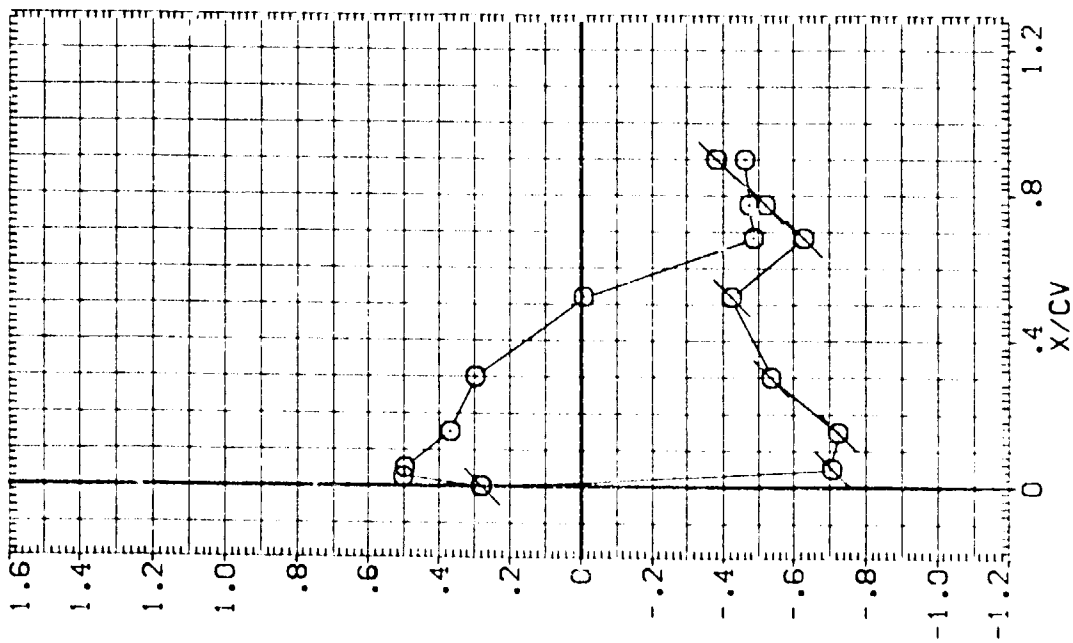


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA Z/BV BETA
 O -0.760 .925 -8.420

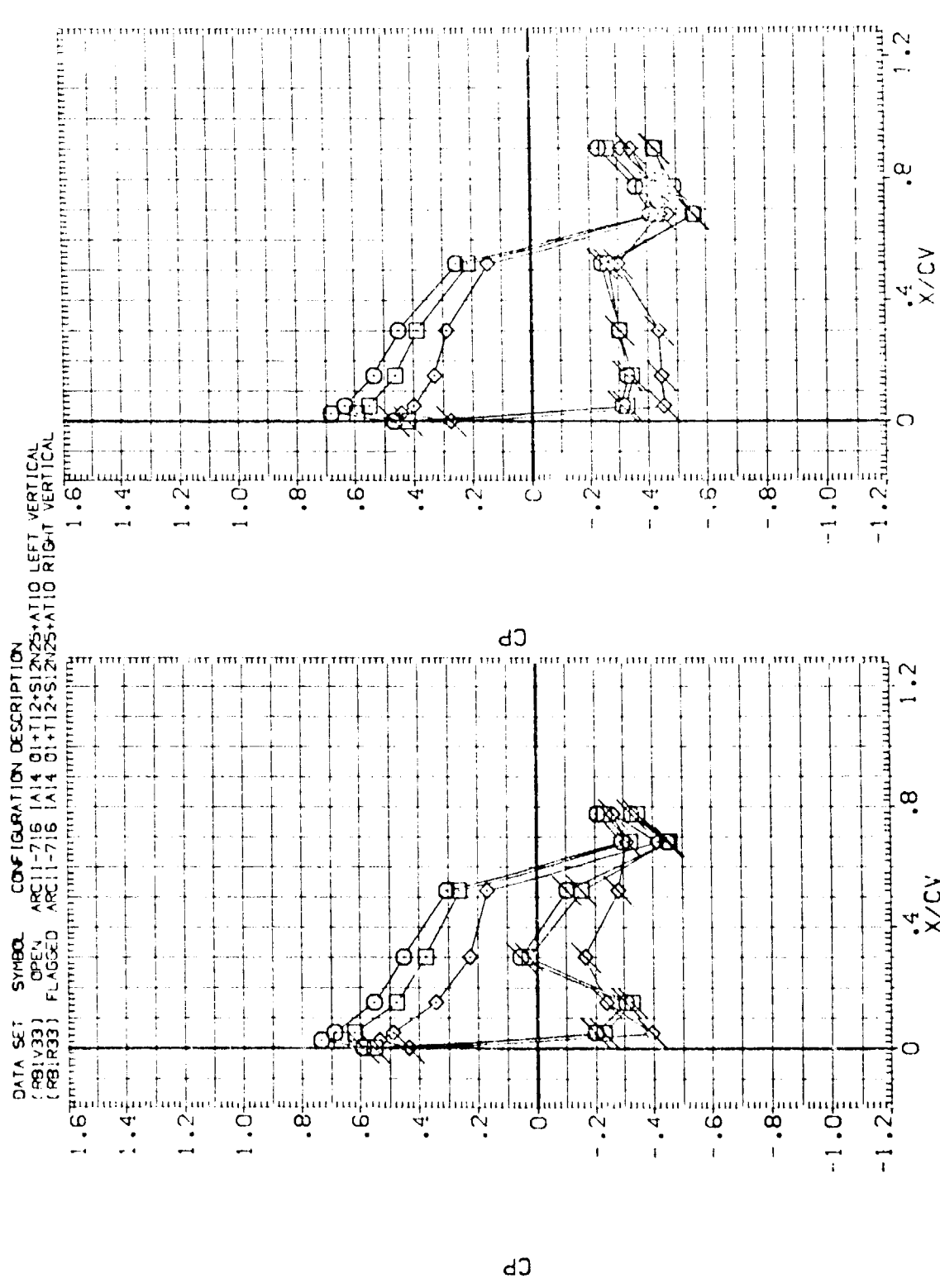
PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOBRK

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 1A14 01+112+512N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 1A14 01+112+512N25+AT10 RIGHT VERTICAL

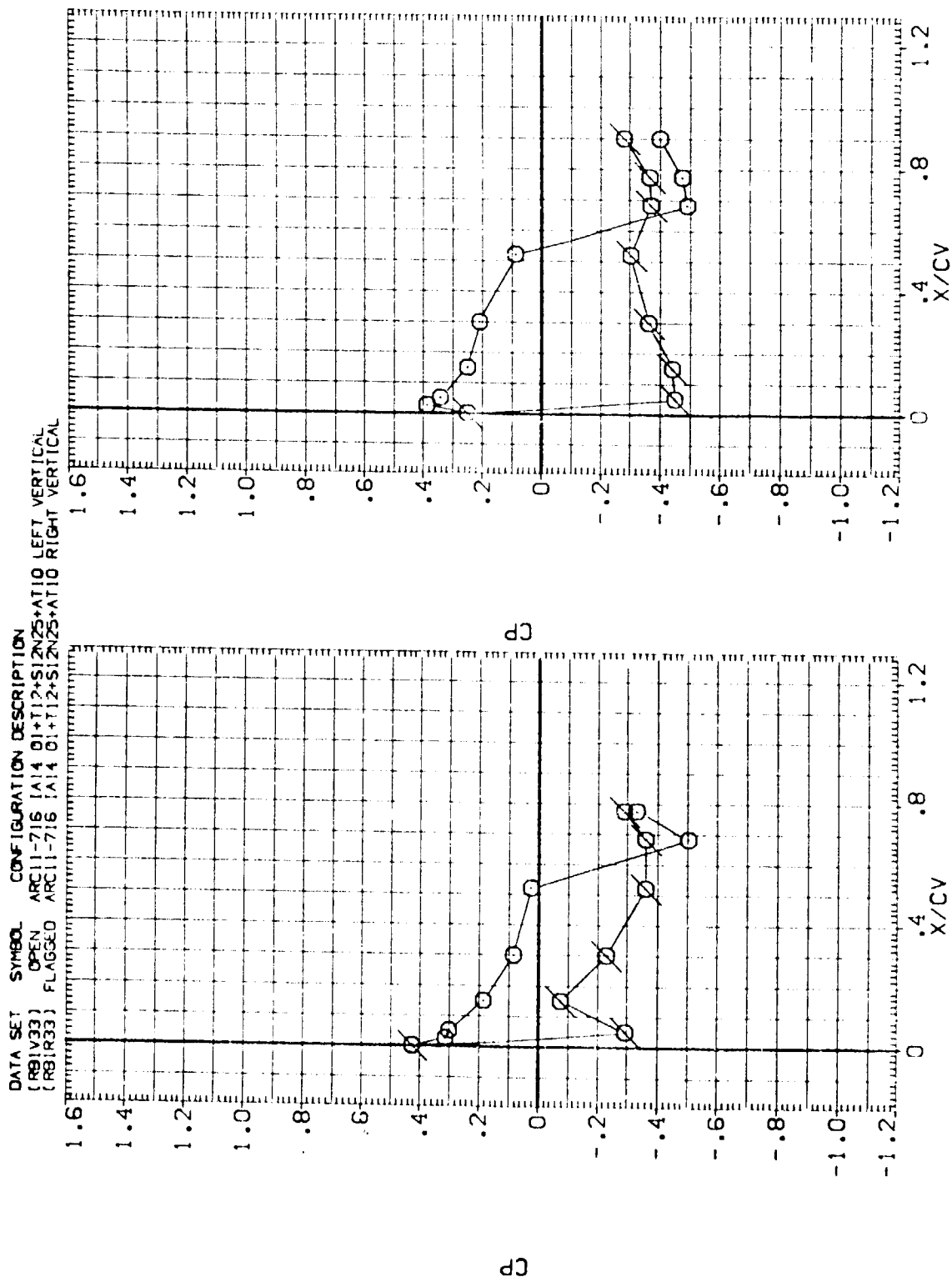


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA-0 Z/BV BETA-0
 ○ -8.220 .158 -7.920
 □ -4.200 .316
 ◇ 4.300



SYMBOL	ALPHA	Z/BV	BETAG	PARAMETRIC VALUES		
				MACH	ELEVON	
				RUDDER	SPDRK	
○	7.910	.158 .316	-7.920	.000	.000	.000



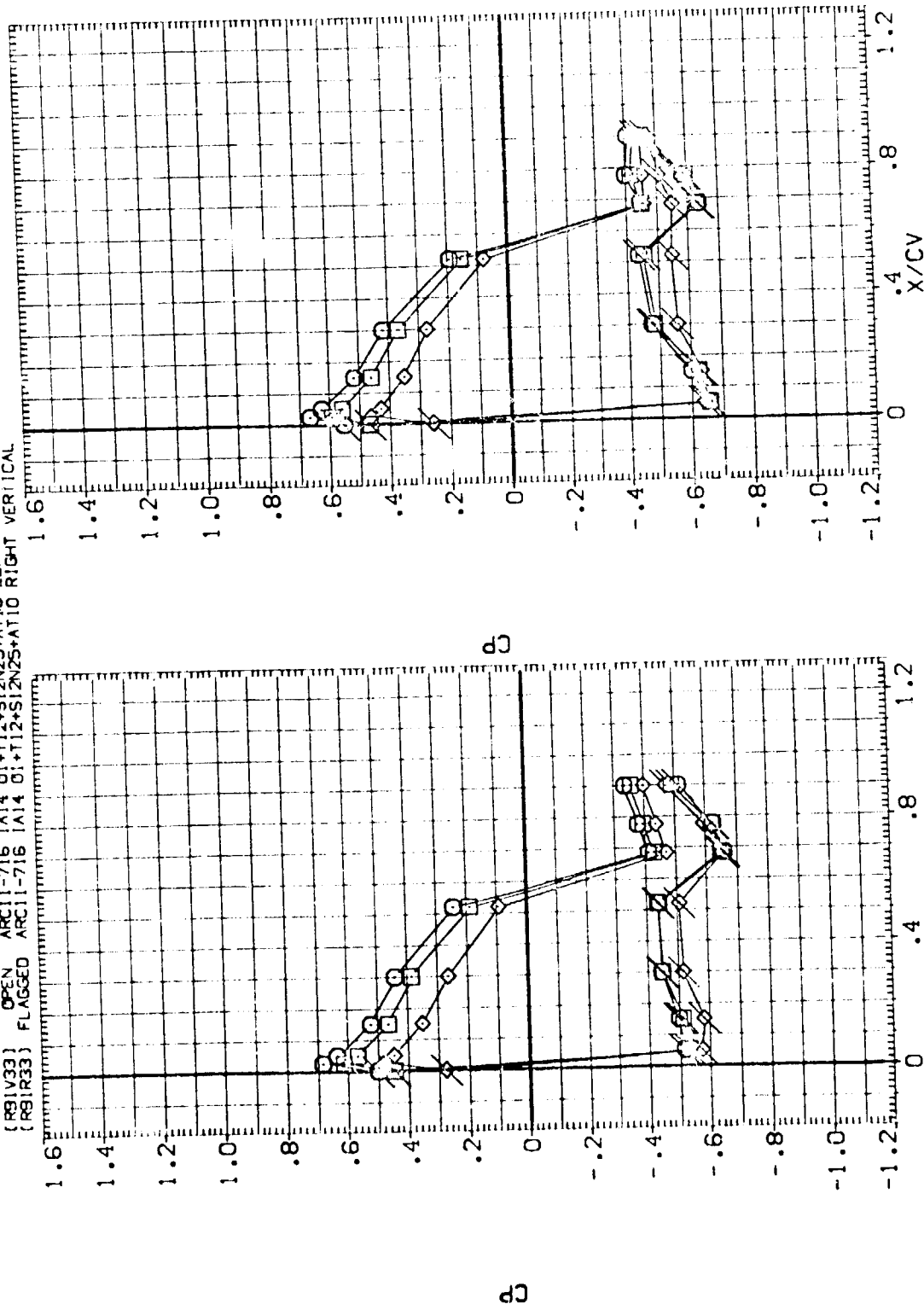
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOILER

MACH
 RUDDER

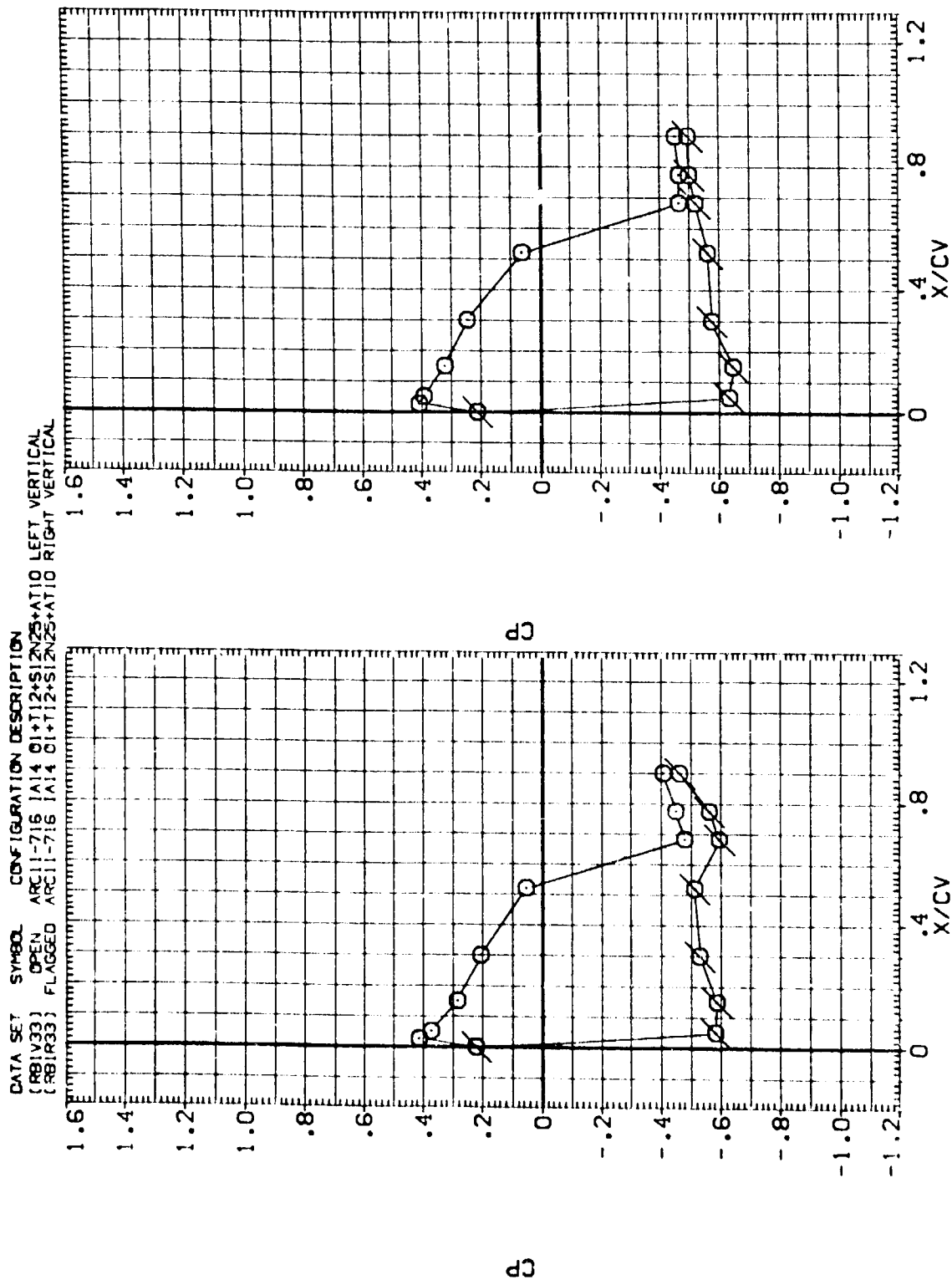
SYMBOL ALPHA Z/BV BETA
 O -8.220 .600 -7.920
 □ -4.200 .840
 ◇ 4.300

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 {RS1V33} OPEN ARC11-716 1A14 01+T12+S12N25+AT10 LEFT VERTICAL
 {RS1R33} FLAGGED ARC11-716 1A14 01+T12+S12N25+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/SV	BETA	PARAMETRIC VALUES		
				MACH	ELEVON	
○	7.910	.600	-7.920	1.250	.000	.000
		.840		RUDDER	SPOSRK	

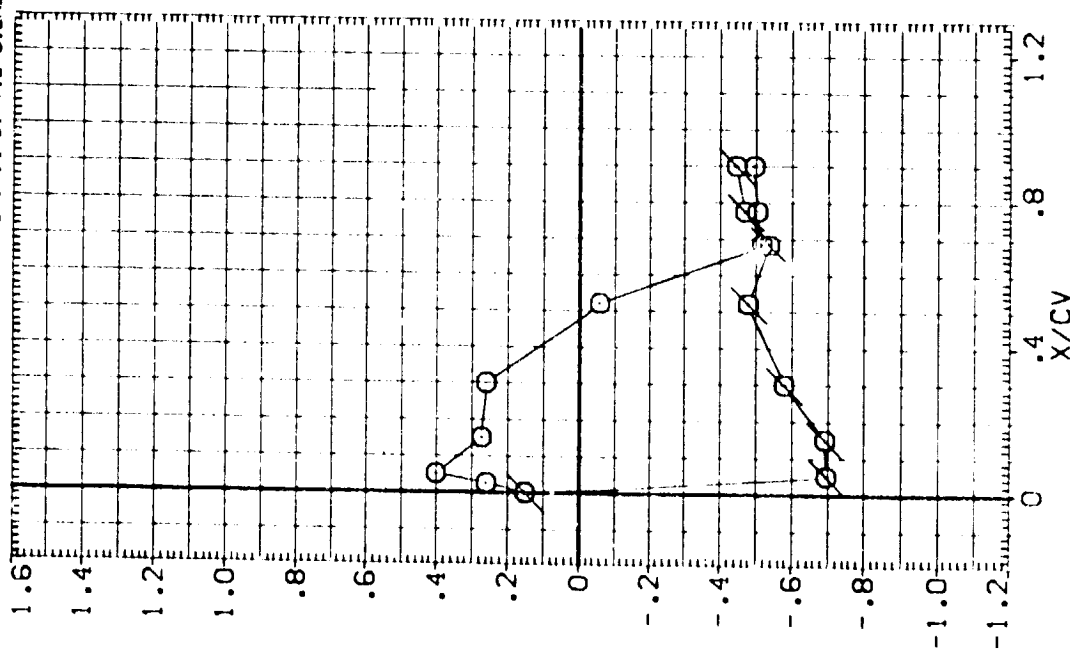


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA Z/BV BETA
 O 7.910 .925 -7.920

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPDRK .000

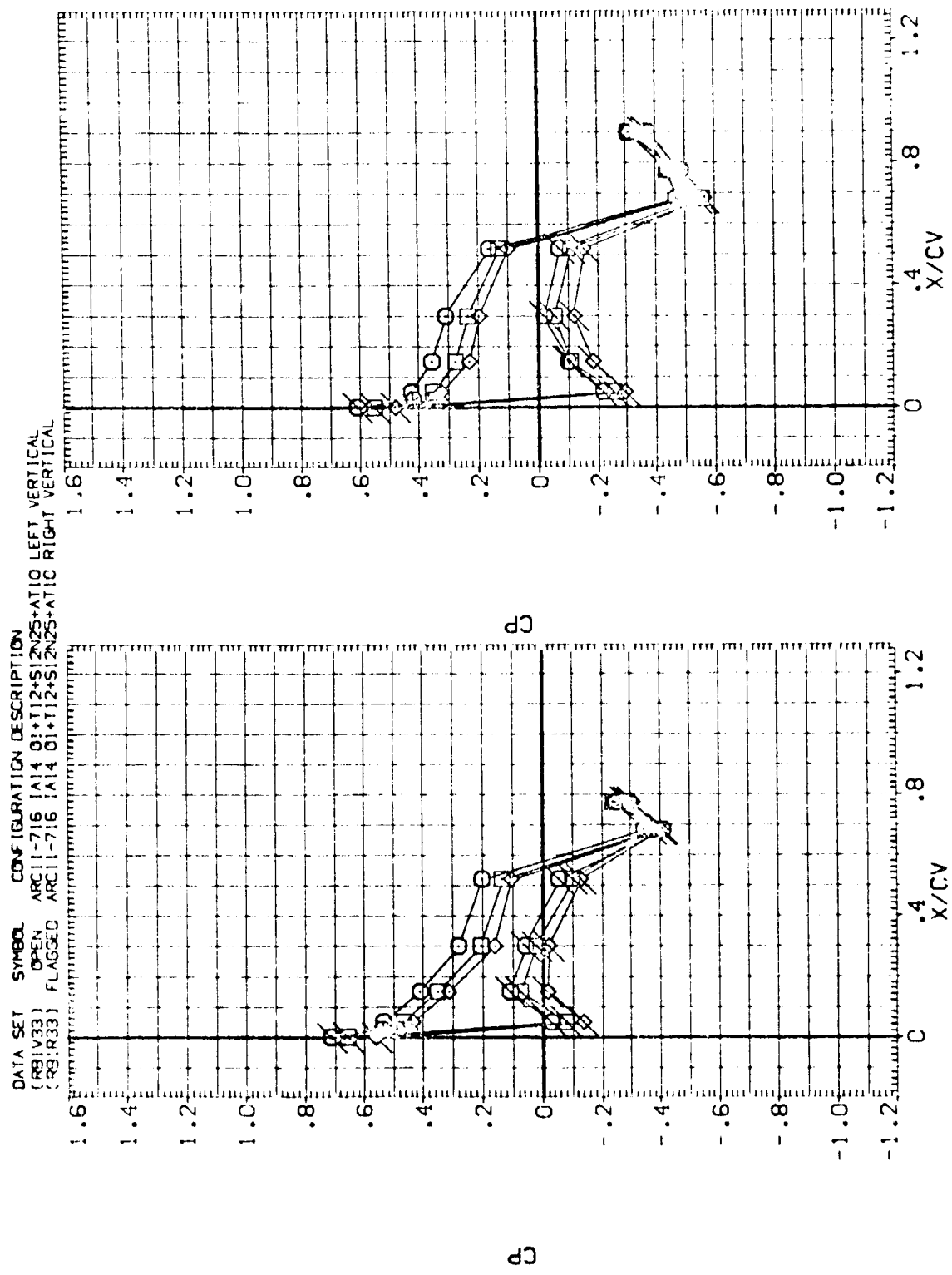
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 [A14 01+112-S12N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 [A14 01+112-S12N25+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

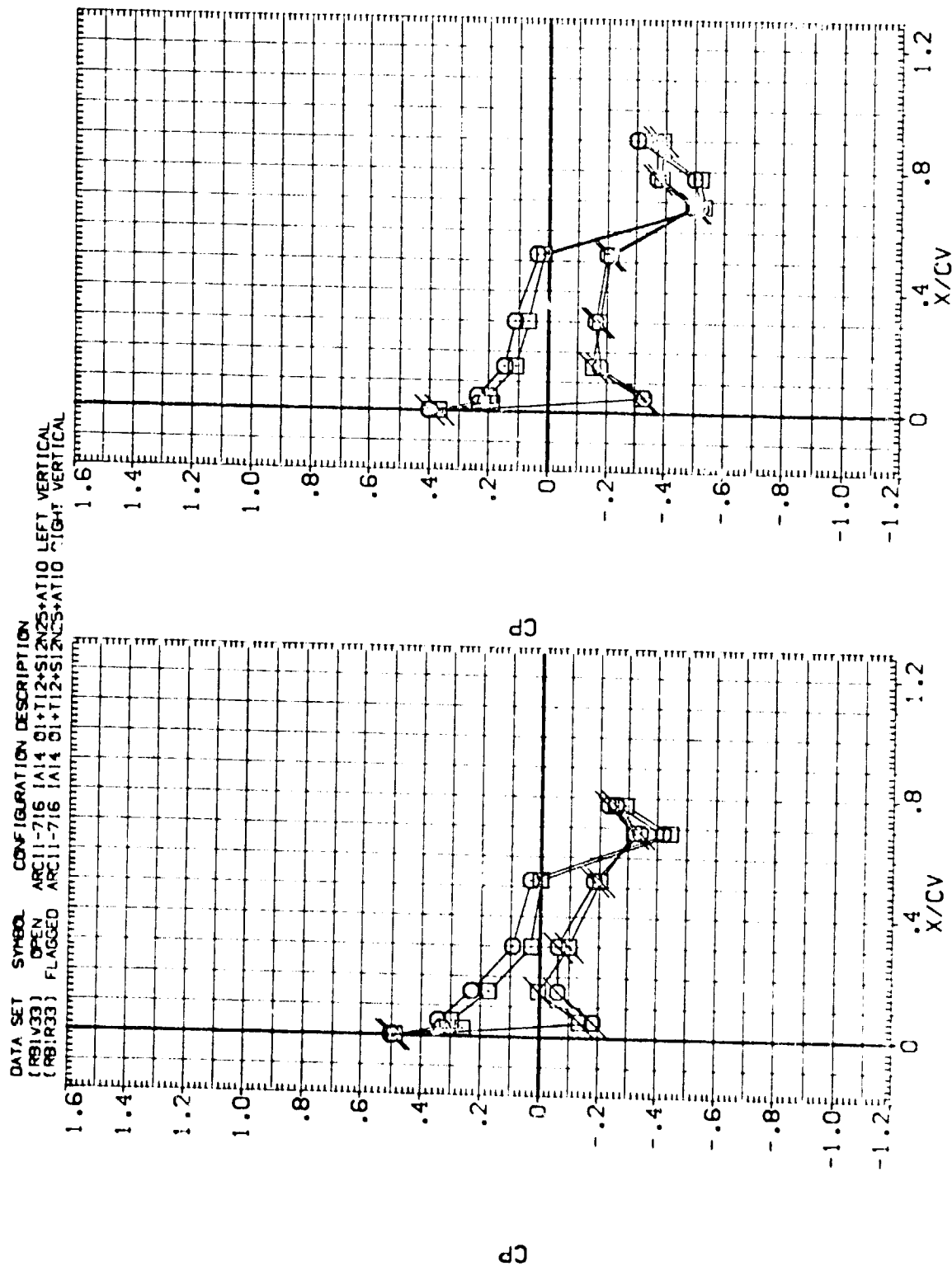
PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPEED .000

SYMBOL ALPHA0 Z/BV BETA0
 -8.220 .158 -3.960
 -4.200 .316
 -7.60



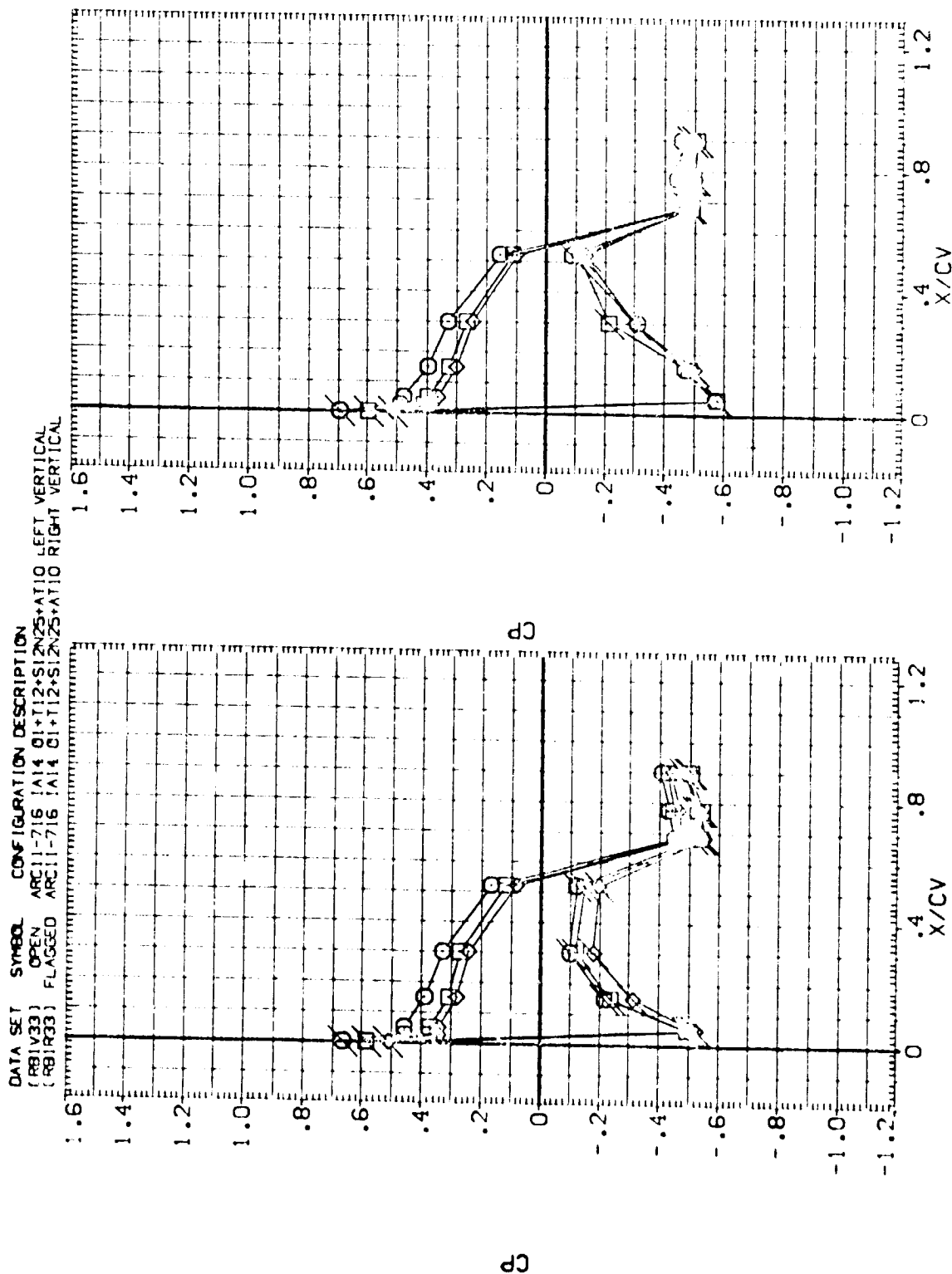
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/BV	BETA	MACH	PARAMETRIC VALUES
○ □	4.300	.158	-3.960	RUDDER	1.250 ELEVON
	7.910	.316			.000 SPOBRK



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/BV	BETA	MACH	PARAMETRIC VALUES
○ □ ◇	-8.220	.600	-3.950	RUDDER	1.250 ELEVON
	-4.200	.840			.000 SPOBRK
	-1.760				.000



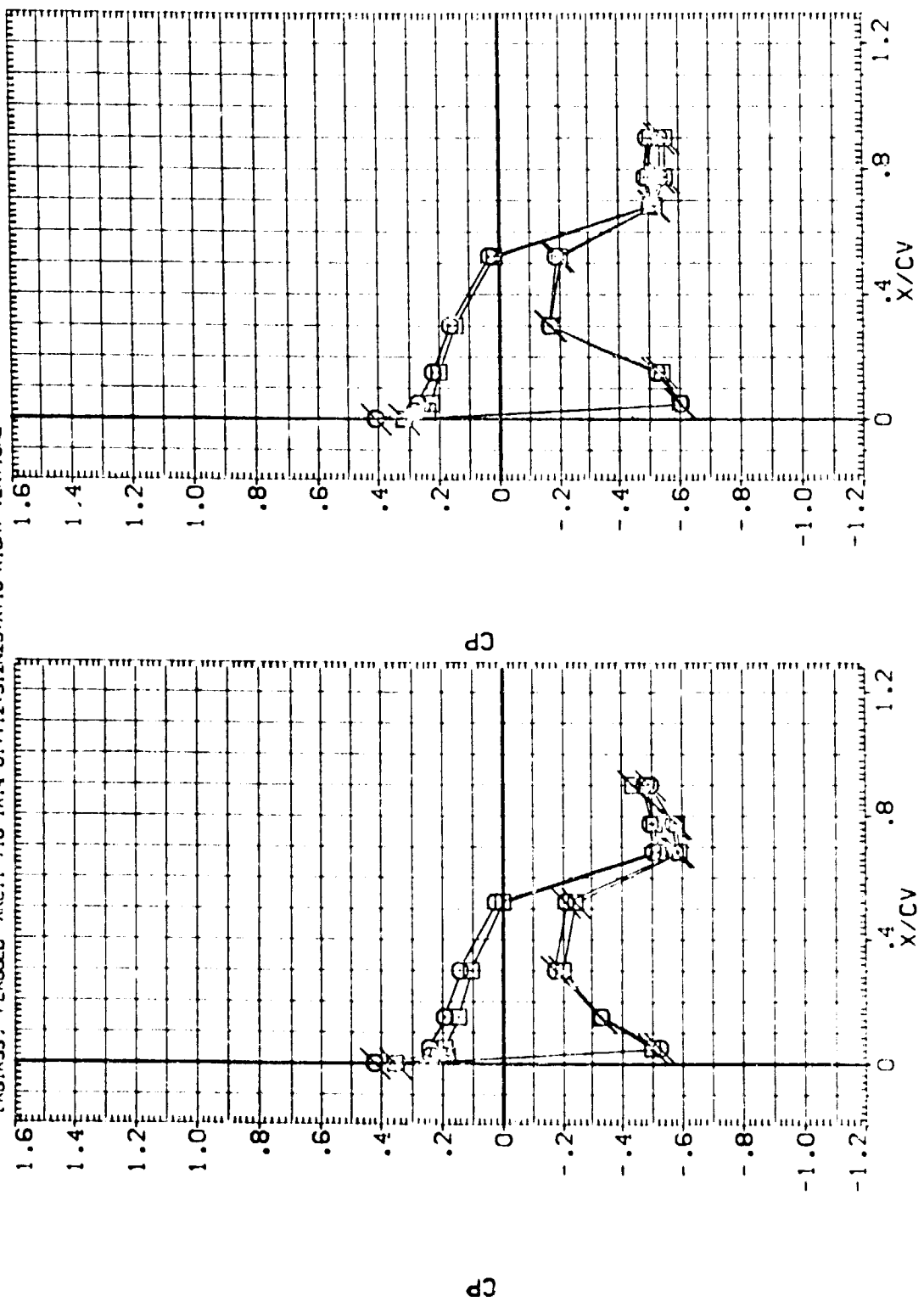
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 1.250 ELEVEN .000
 .000 SPOBRK .000

MACH
 RUDDER

SYMBOL ALPHA0 Z/BV BETA0
 4.300 .600 -3.960
 7.910 .840

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81V33) OPEN ARC11-716 [A14 01+T12-S12N25+AT10 LEFT VERTICAL
 (R81R33) FLAGGED ARC11-716 [A14 01+T12-S12N25+AT10 RIGHT VERTICAL

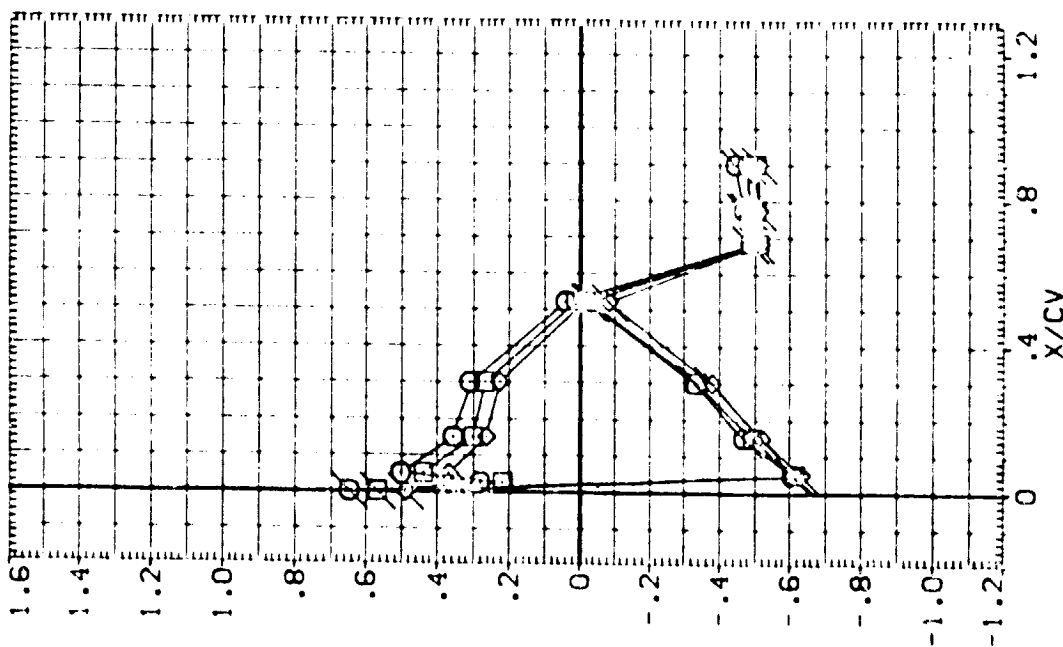


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOILER .000

SYMBOL ALPHA0 Z/BV BETA0
 -8.220 .925 -3.960
 -4.200
 -1.760

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81V33) OPEN ARC11-716 (A14 01+T12+S12)ZS+AT10 LEFT VERTICAL
 (R81R33) FLAGGED ARC11-716 (A14 01+T12+S12)ZS+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL
□ □

ALPHA
4.300
7.910

Z/BV
.925

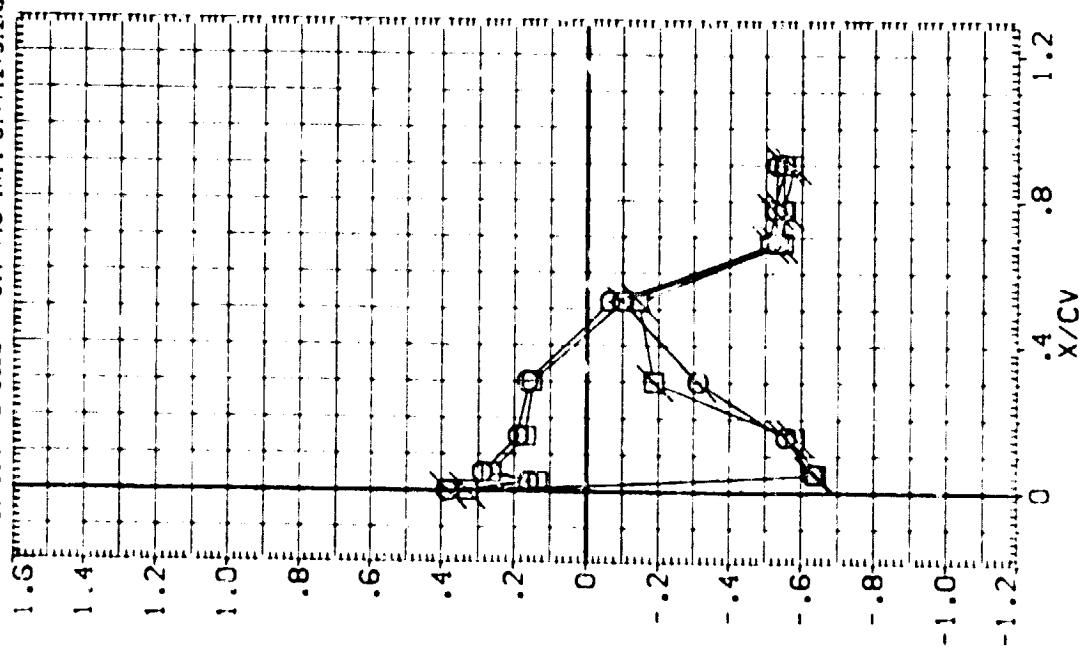
BETA
-3.960

MACH
1.250

ELEVON
.000

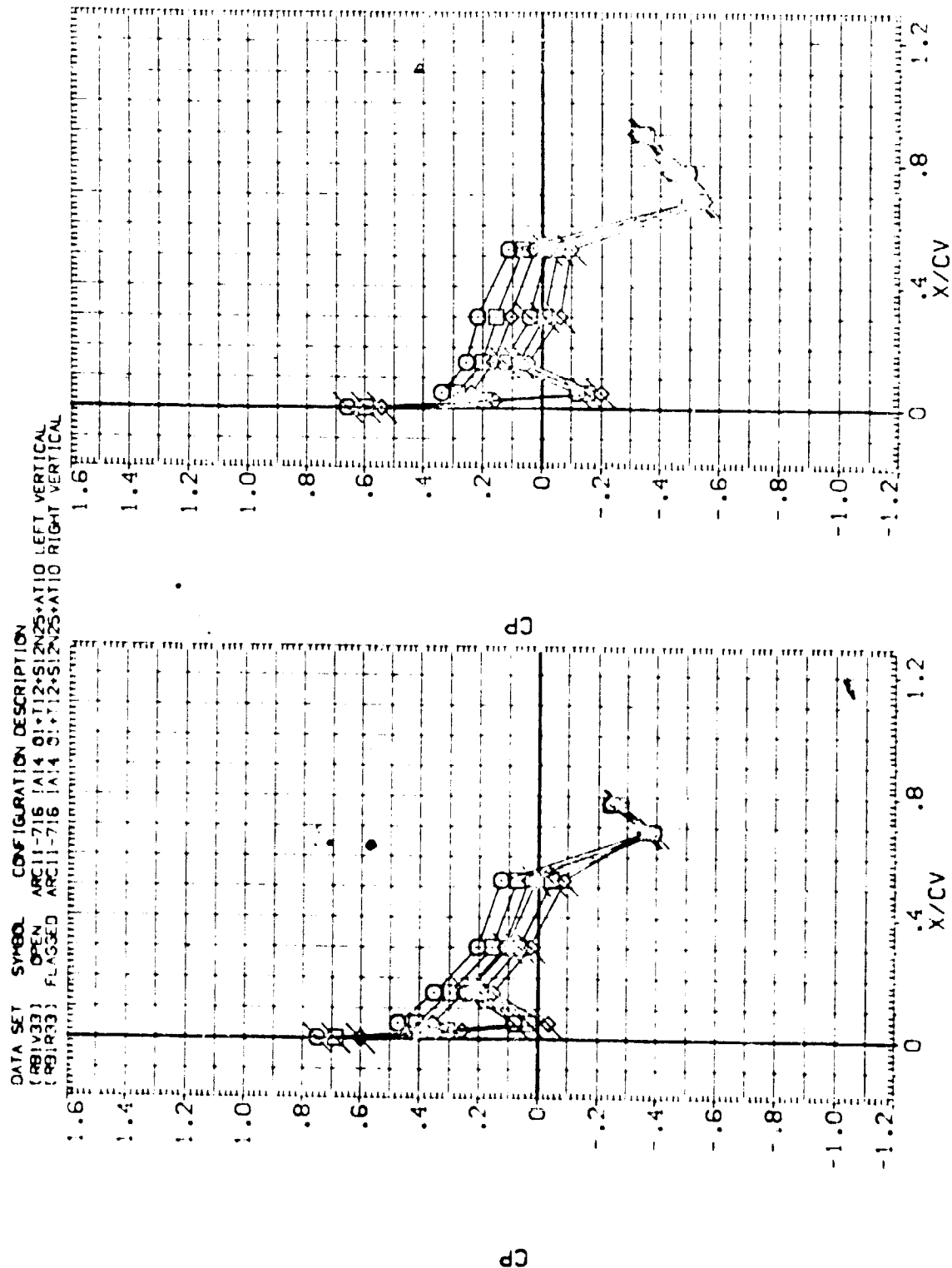
SPDRK
.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R91V33) OPEN ARC11-716 A14 01+T12+S1.2N25+AT10 LEFT VERTICAL
(R91R33) FLAGGED ARC11-716 A14 01+T12+S1.2N25+AT10 RIGHT VERTICAL



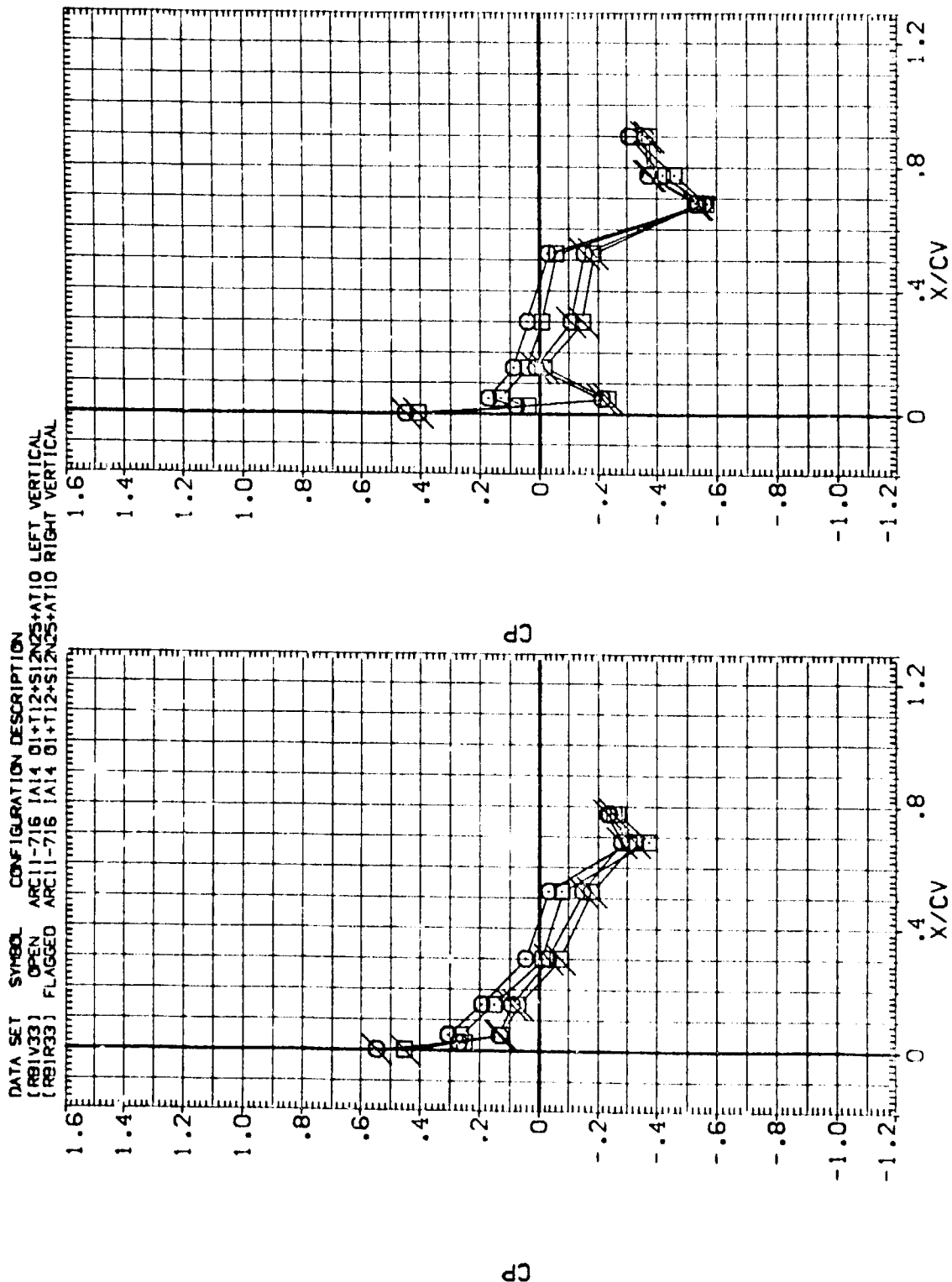
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/BY	BETA	MACH	PARAMETRIC VALUES
○	-8.220	.158	-1.970	RUDDER	1.250 ELEVON .000
□	-4.200	.316			.000 SPOON .000
◇	-7.760				



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

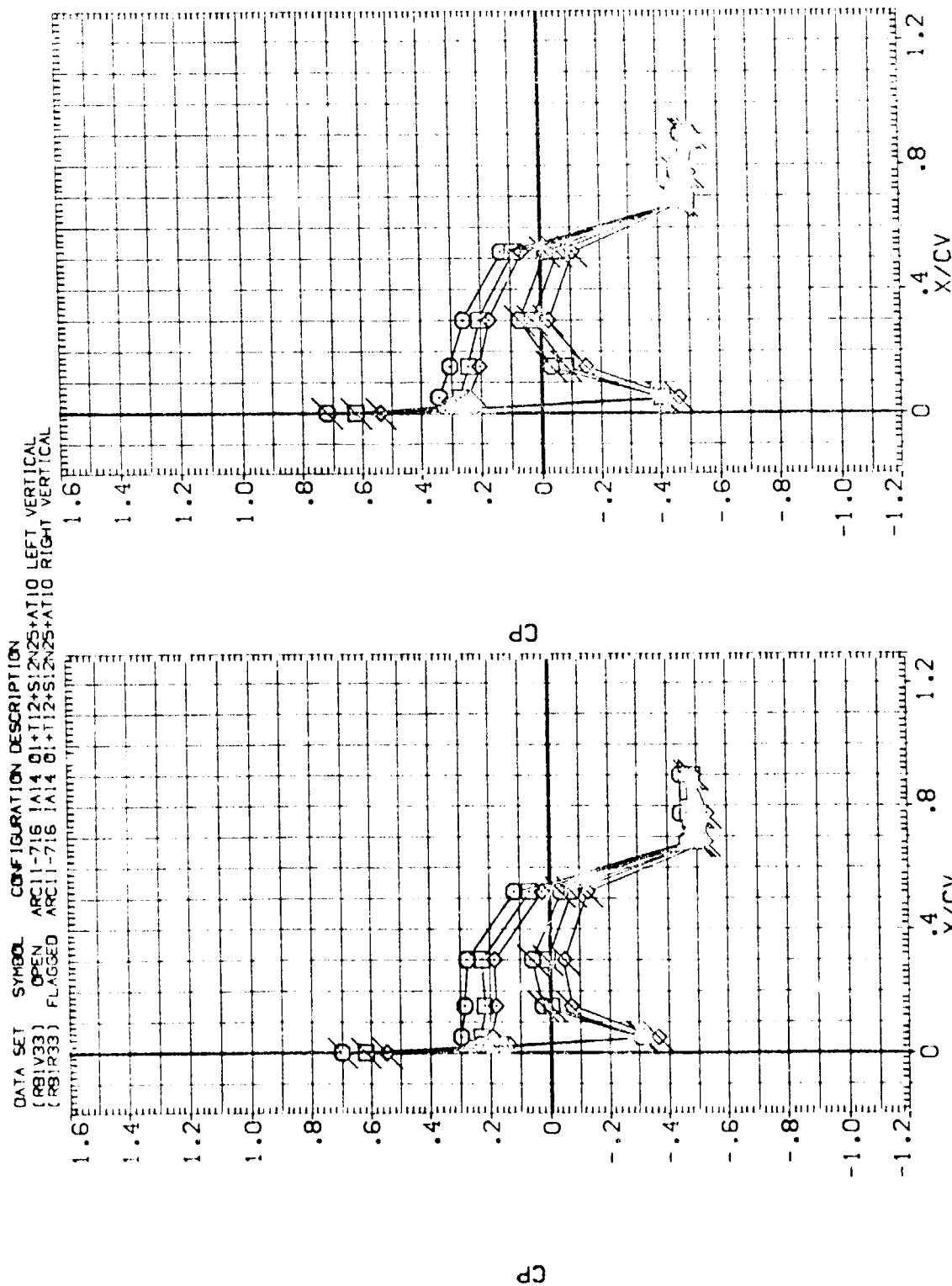
SYMBOL	ALPHA	Z/BV	BETA	PARAMETRIC VALUES
○	4.300	.158	-1.970	MACH 1.250 ELEVON .000
□	7.910	.316		RUDDER .000 SPOILER .000



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000

SYMBOL ALPHA Z/BV BETA
 O -8.220 .600 -1.970
 I -4.200 .840
 ◇ -760

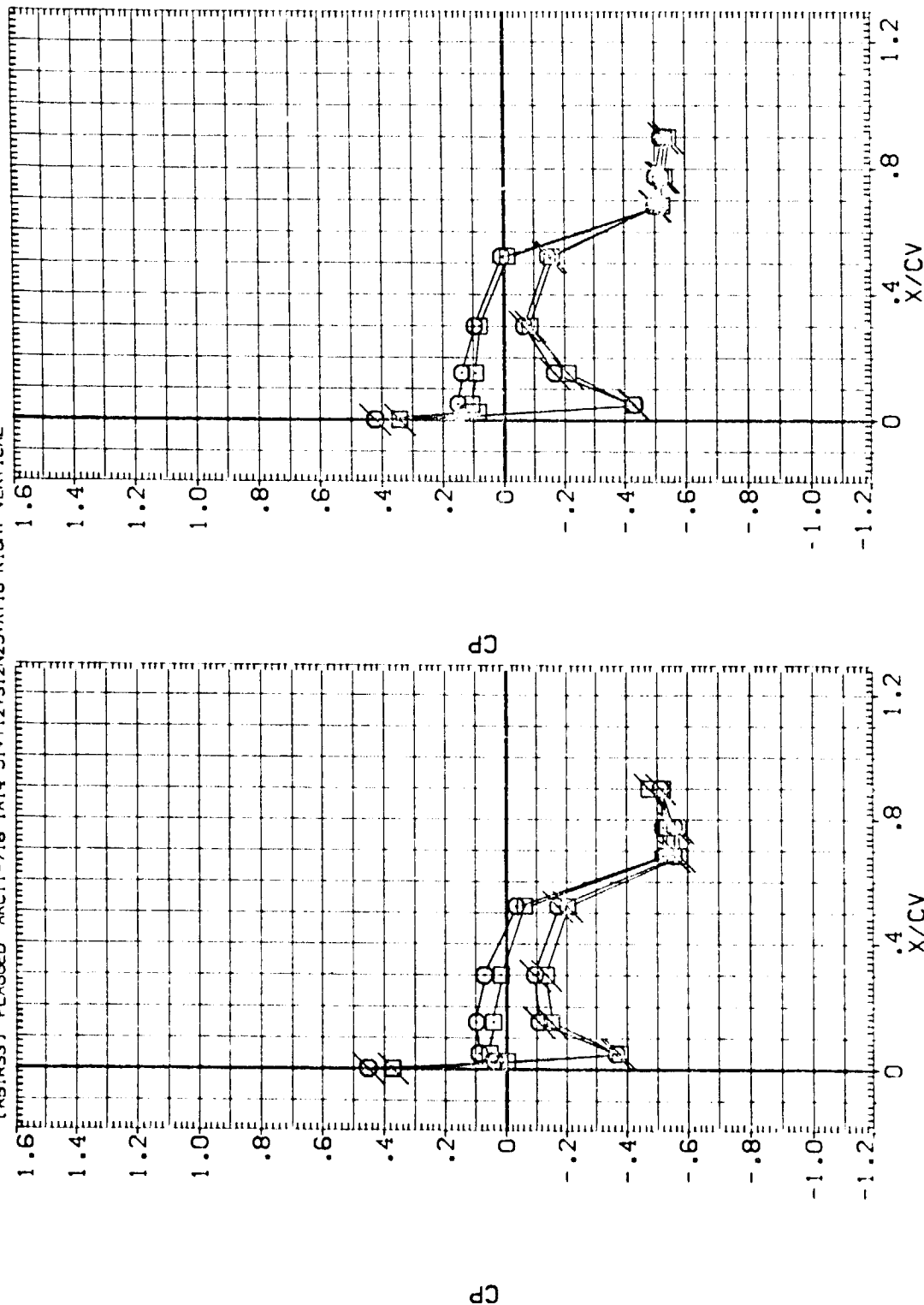


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOBRK .000

SYMBOL ALPHA0 Z/BV BETA0
 O 4.300 .600 -1.970
 □ 7.910 .840

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81V33) OPEN ARC11-716 [A14 01+T12+S12N25+ATIO LEFT VERTICAL
 (R81R33) FLAGGED ARC11-716 [A14 01+T12+S12N25+ATIO RIGHT VERTICAL



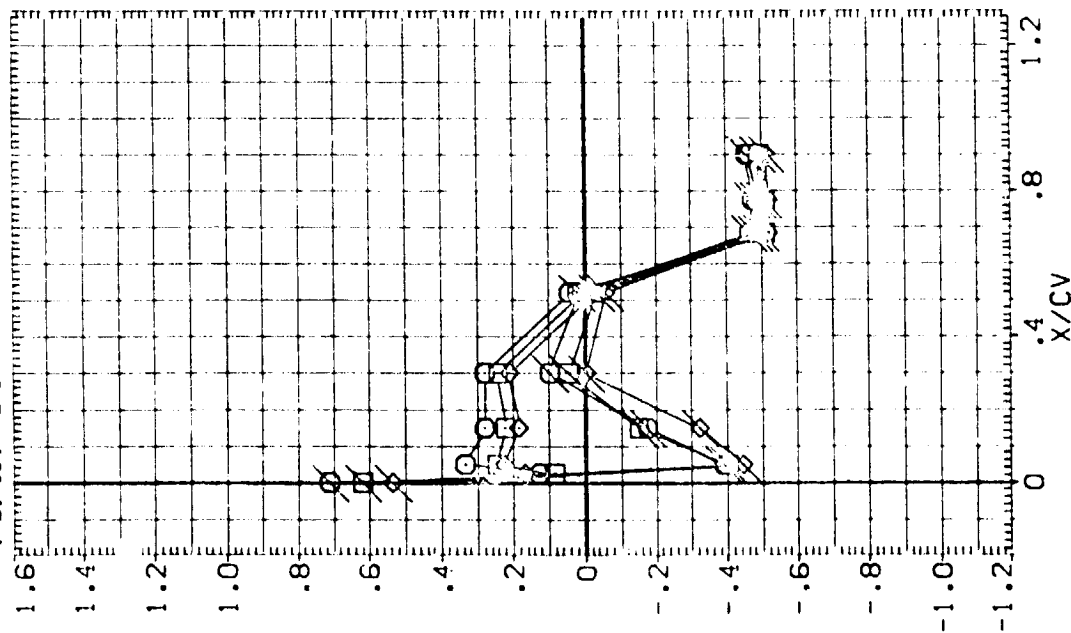
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOILER

MACH
 RUDDER

SYMBOL ALPHA0 Z/BV BETA0
 O -8.220 .925 -1.970
 □ -4.200
 ◇ -.760

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 1A14 01+T12+S12N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 1A14 01+T12+S12N25+AT10 RIGHT VERTICAL



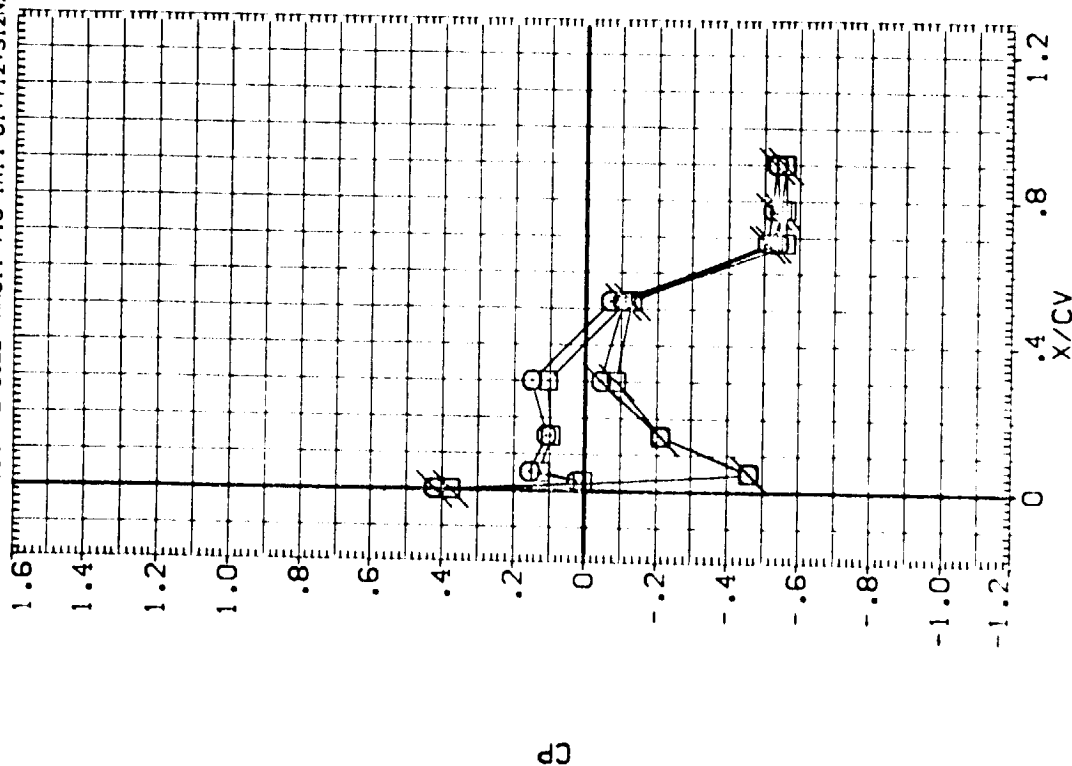
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL
□ □

ALPHA0 4.300 7.910
Z/BV .925
BETA0 -1.970

MACH 1.250
RUDDER .000
PARAMETRIC VALUES
ELEVON .000
SPORRK .000

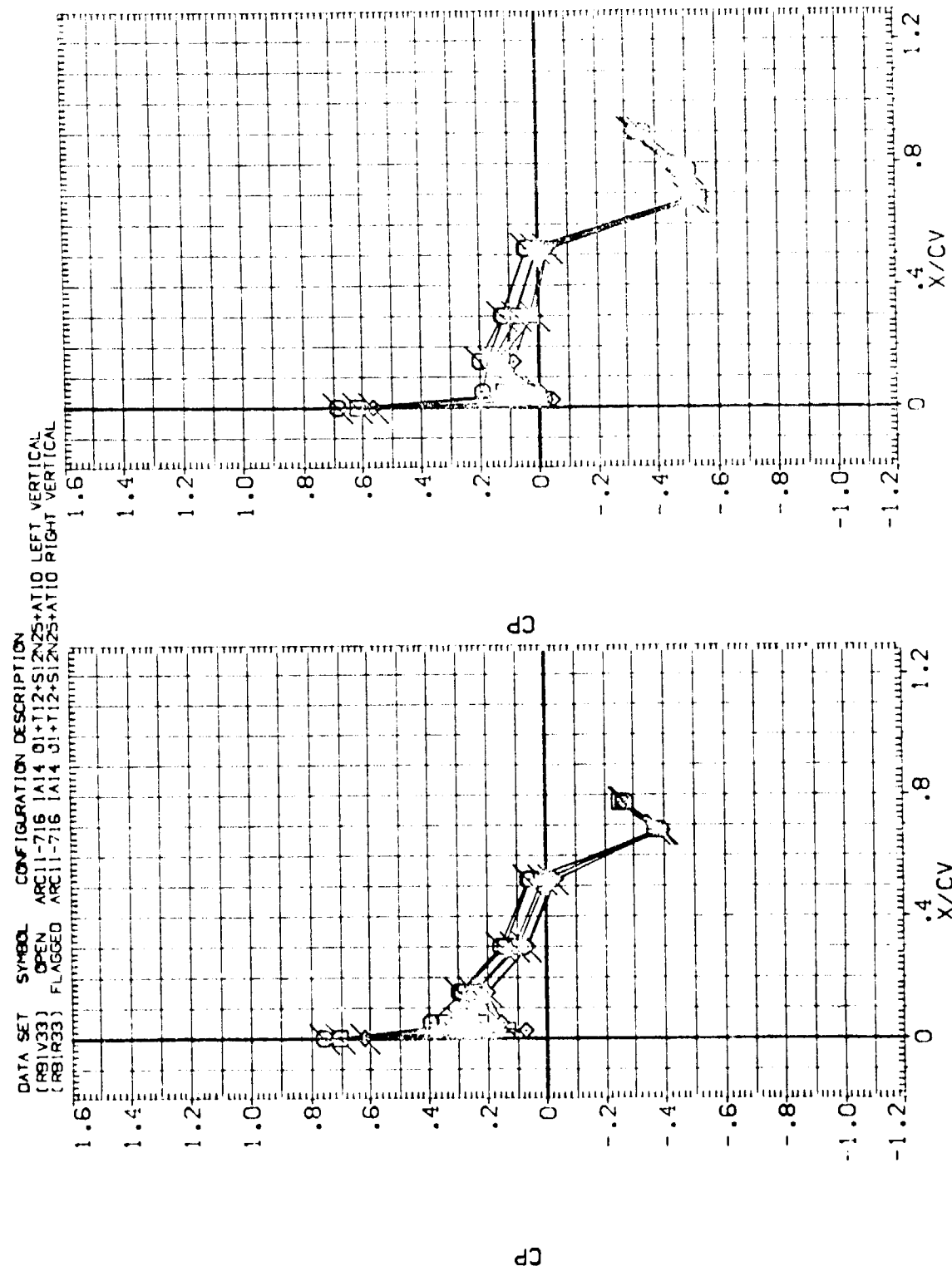
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RBI433) OPEN ARC11-716 1A14 01+T12+S12N25+AT10 LEFT VERTICAL
(RBI433) FLAGGED ARC11-716 1A14 01+T12+S12N25+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

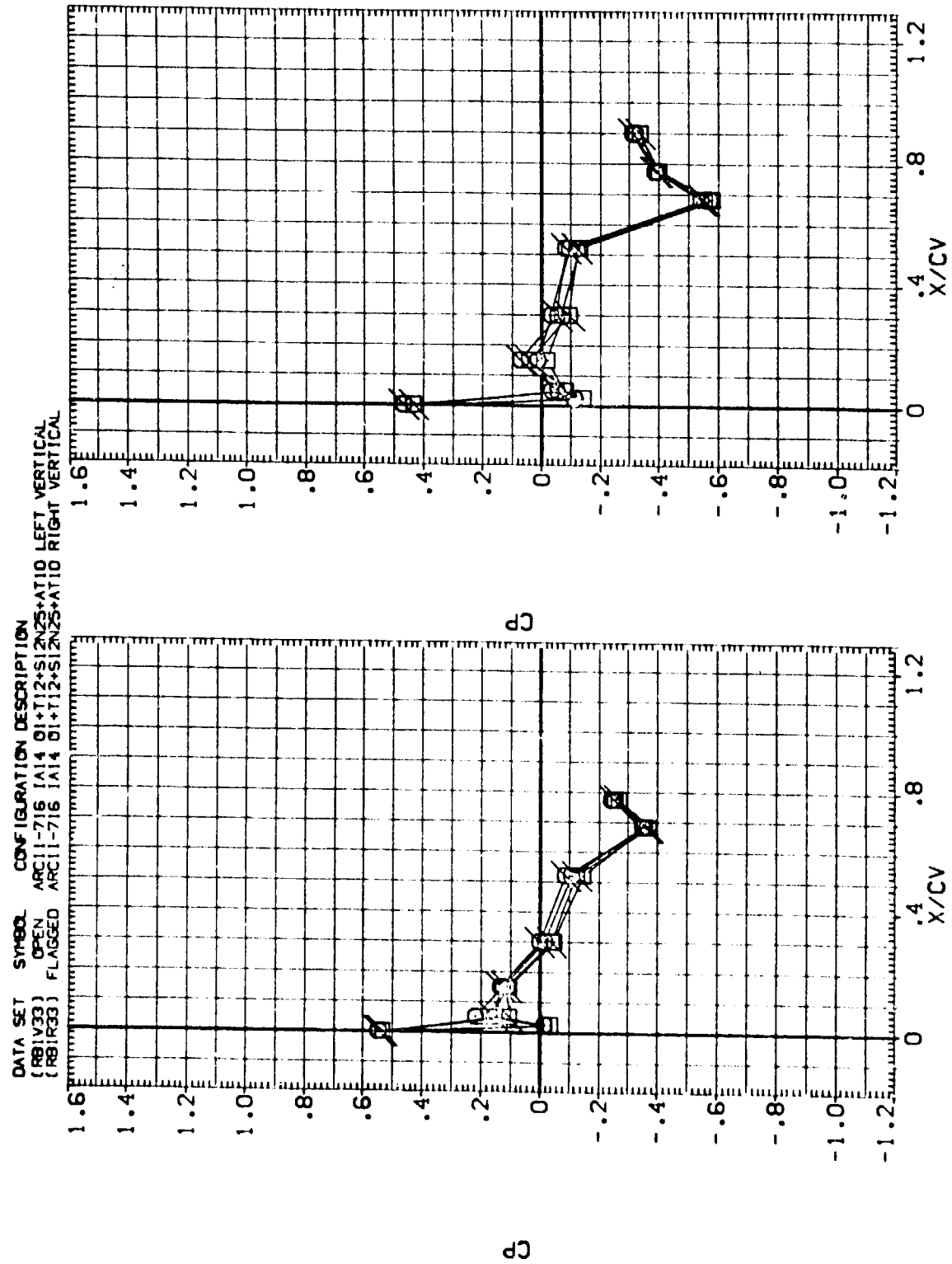
PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPDBRK .000

SYMBOL ALPHA0 Z/BV BETA0
 -8.220 .158 .020
 -4.200 .316
 -1.760



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/BV	BETA	MACH	PARAMETRIC VALUES
	4.300	.158	.020		
<input type="checkbox"/>	7.910	.316		RUDER	ELEVON
				.000	.000
				.000	.000



PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOBRK .000

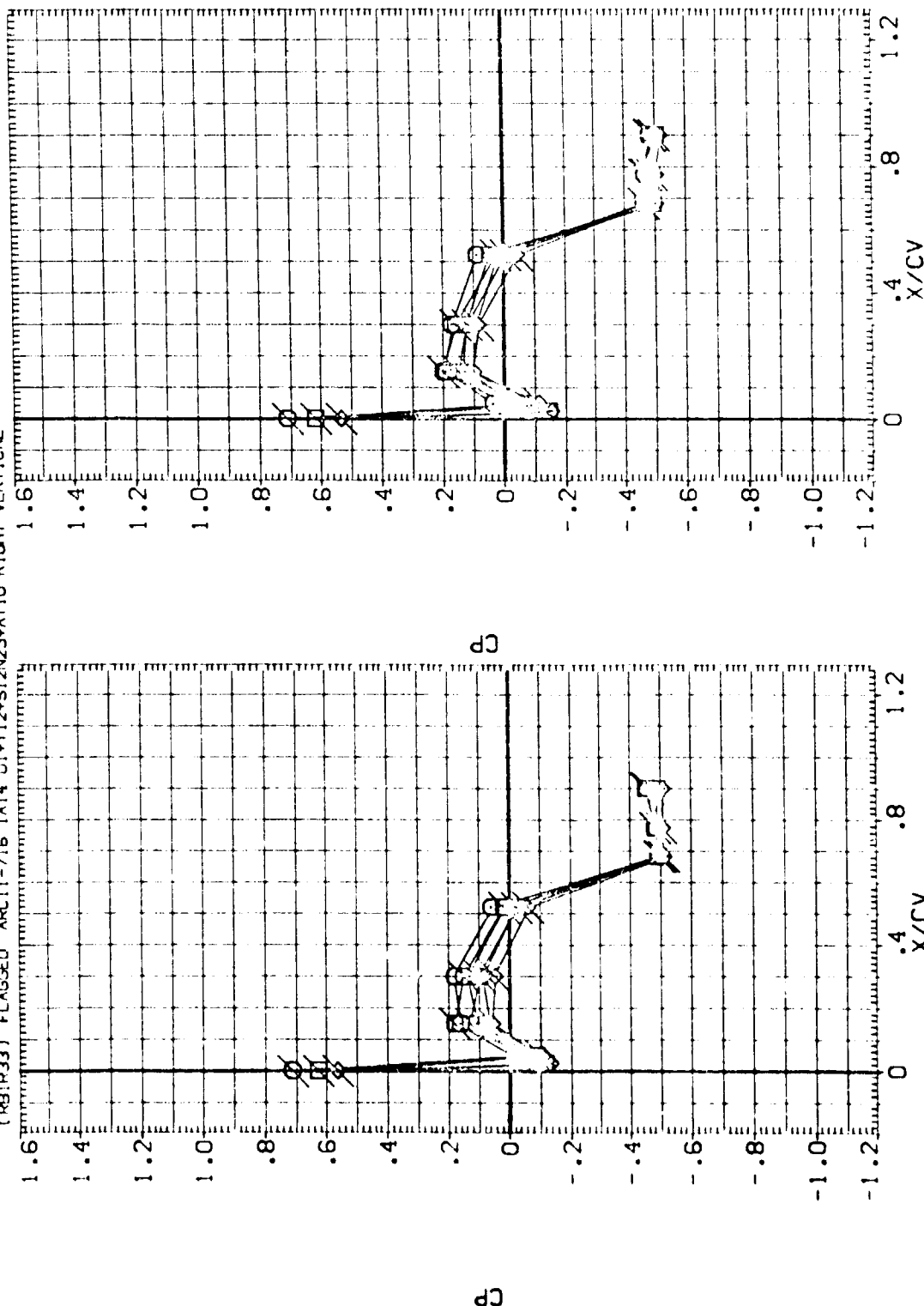
ALPHA0
-8.220
-4.230
-.760

BETA0
.020

Z/BV
.600
.840

SYMBOL
□ □ □

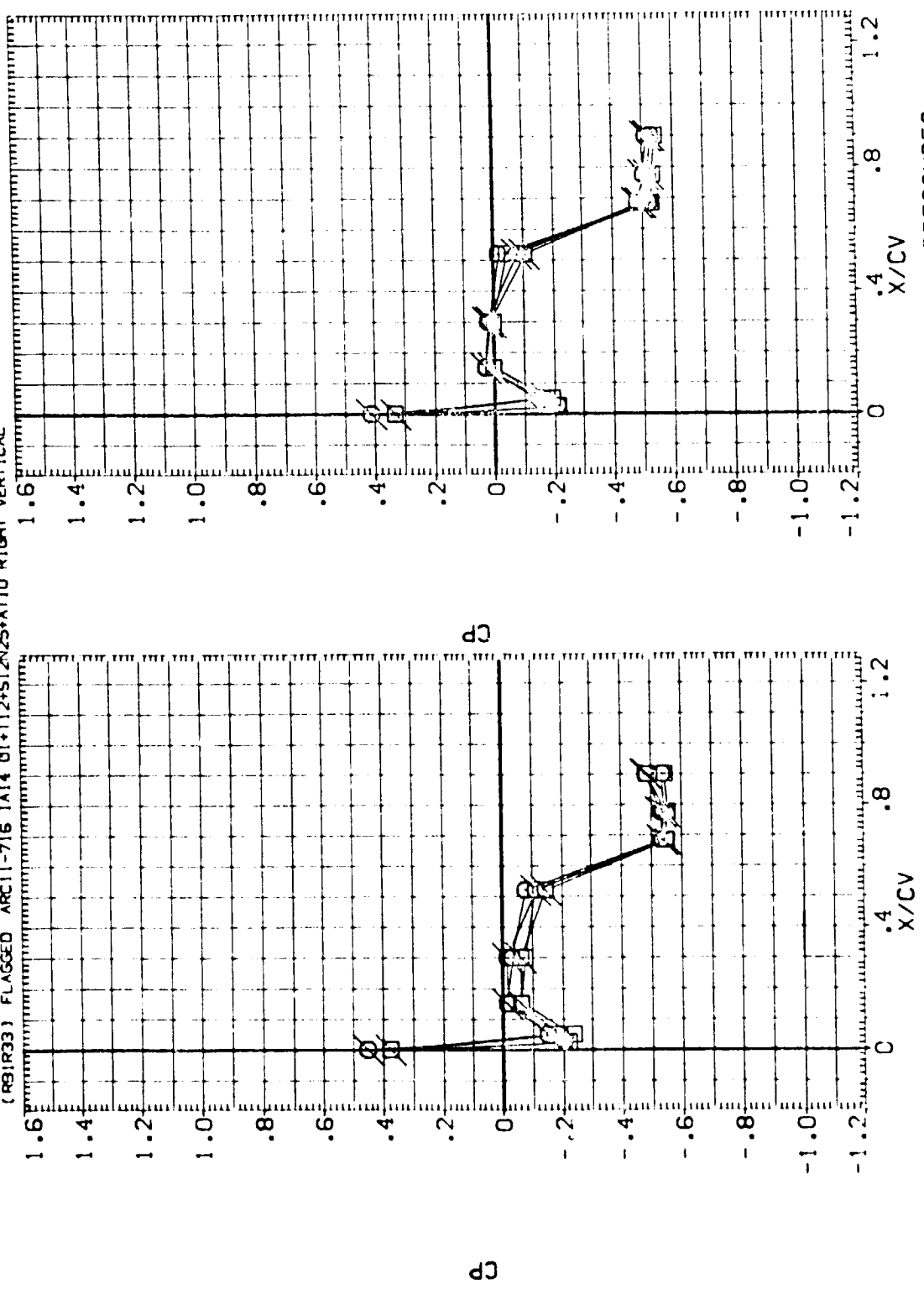
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RB1V33) OPEN ARC11-716 [A14 Q1+T12+S12N25+AT10 LEFT VERTICAL
(RB1R33) FLAGGED ARC11-716 [A14 Q1+T12+S12N25+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA0 Z/BV BETA0
 ○ 4.300 .600 .020
 □ 7.910 .840 .020

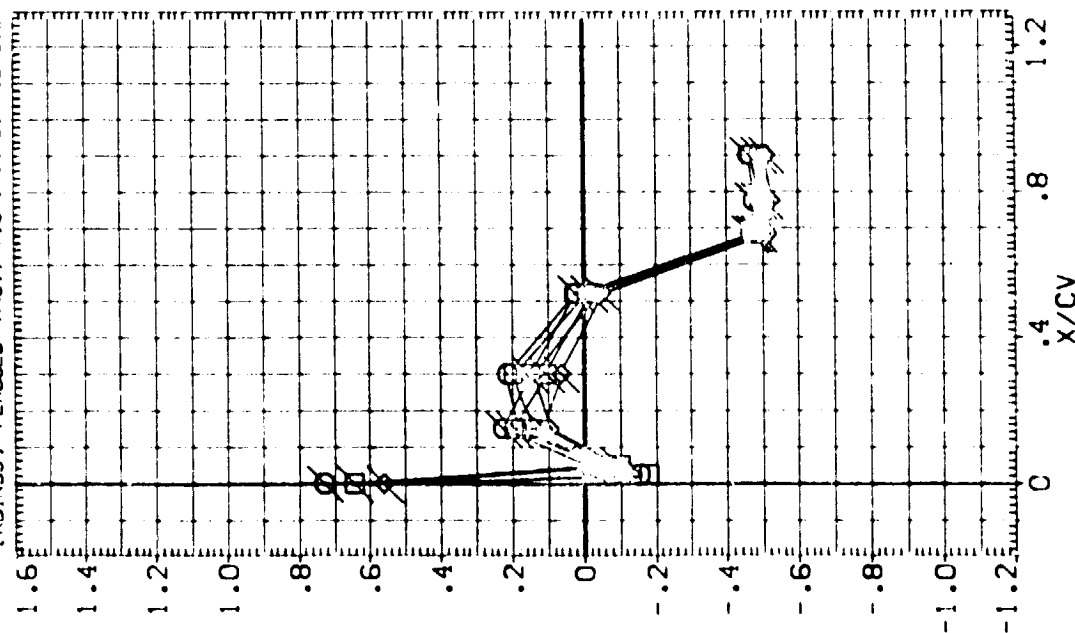
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 IAI4 01+112+SI2NCS+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 IAI4 01+112+SI2NCS+AT10 RIGHT VERTICAL



PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000

SYMBOL ALPHA0 Z/BV BETA0
 -8.220 .925 .020
 -4.200
 -7.760

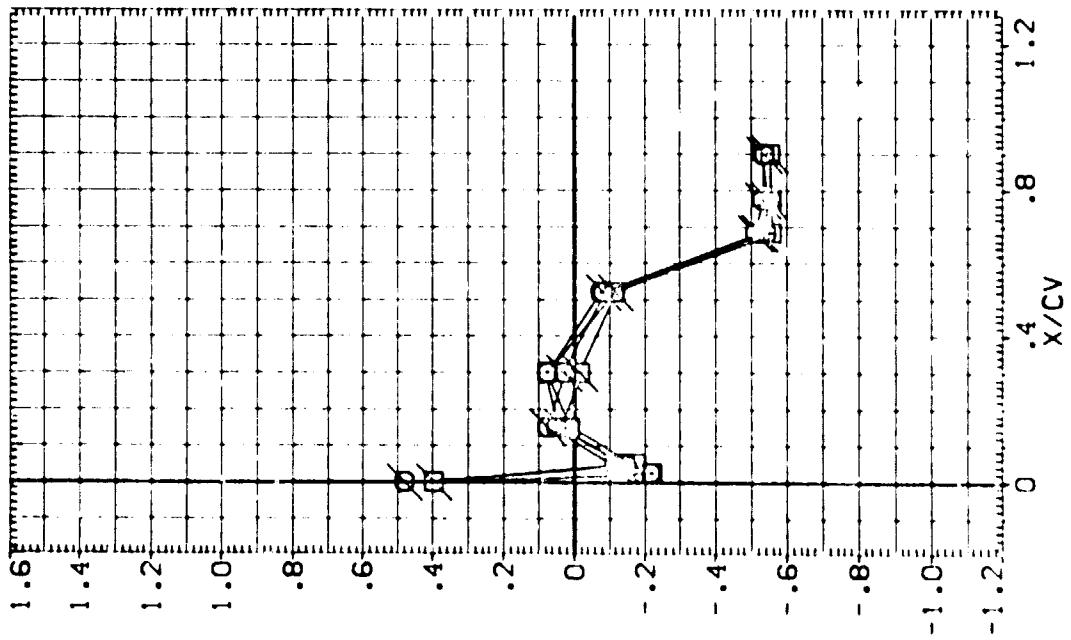
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 [A14 0] T12+S12N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 [A14 0] T12+S12N25+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA0	Z/BV	BETA0	MACH	PARAMETRIC VALUES
○	4.300	.925	.020	RUDDER	1.250 ELEVON .000
□	7.910				.000 SPOILER .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 1A14 01+112+512N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 1A14 01+112+512N25+AT10 RIGHT VERTICAL

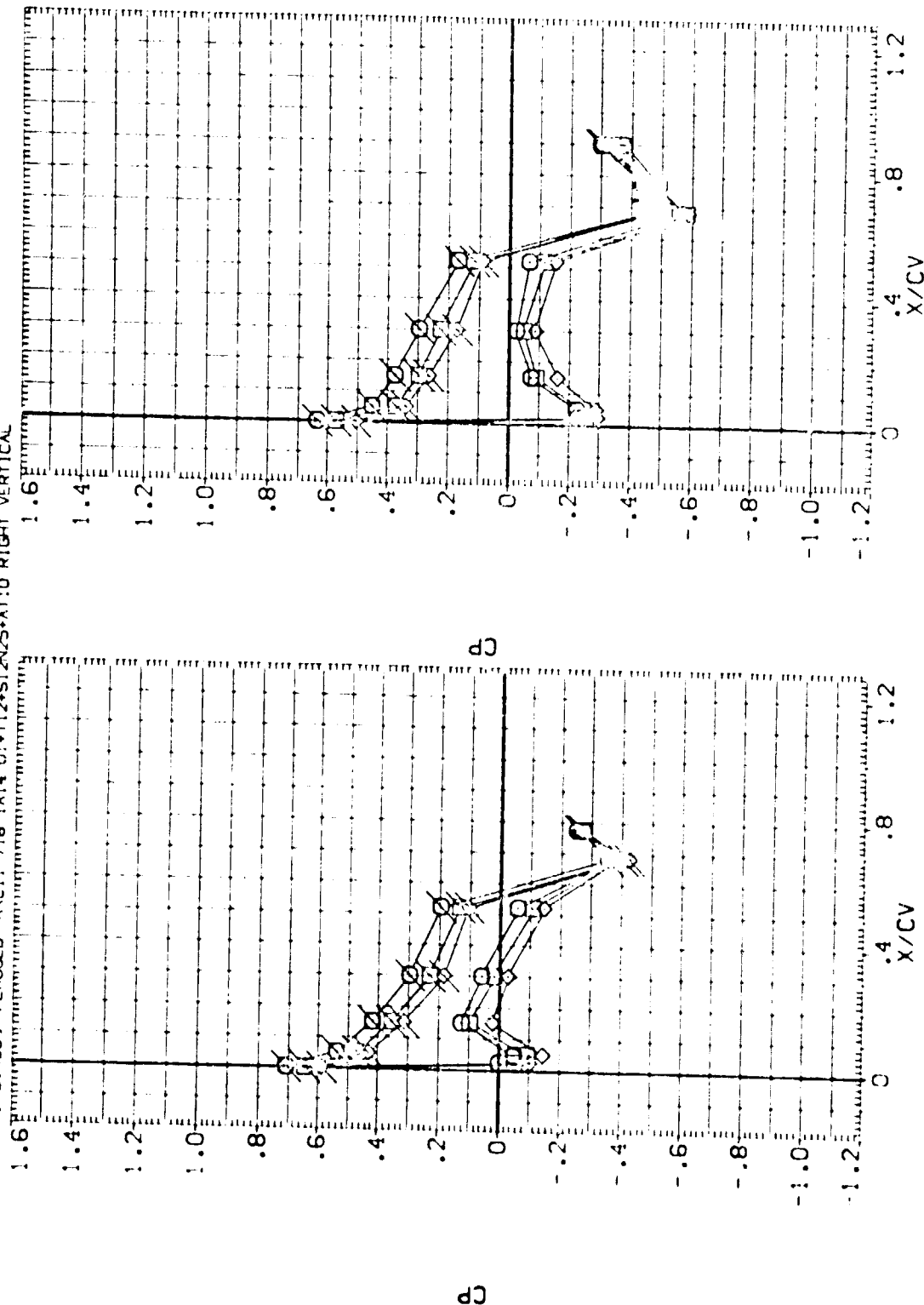


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA0 Z/BV BETA0
 O -8.220 .158 4.080
 I -4.200 .316
 D -7.60

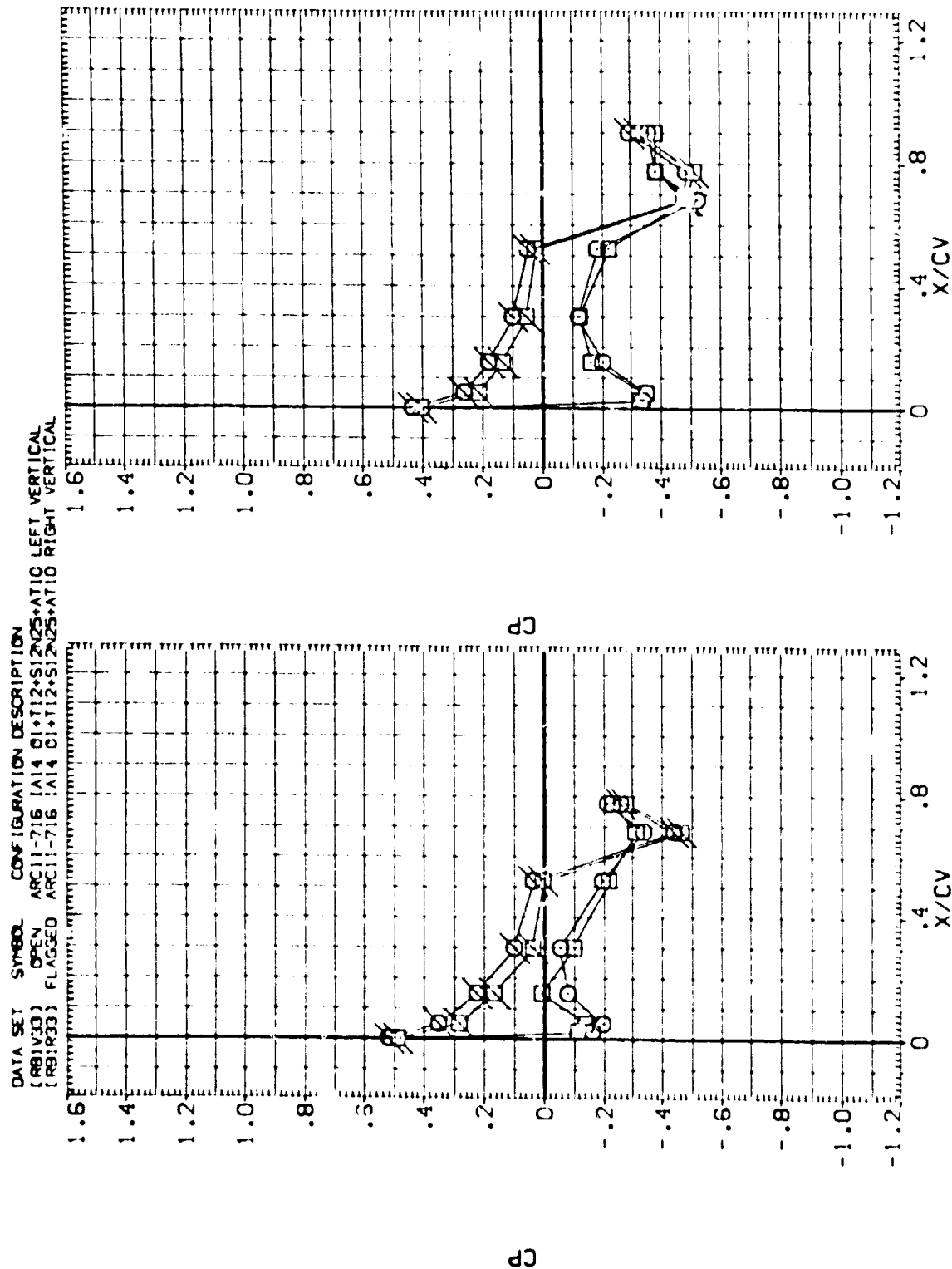
PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 FLUDDER .000 SPDBRK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 [A14 0] T12-S12N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 [A14 0] T12-S12N25+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

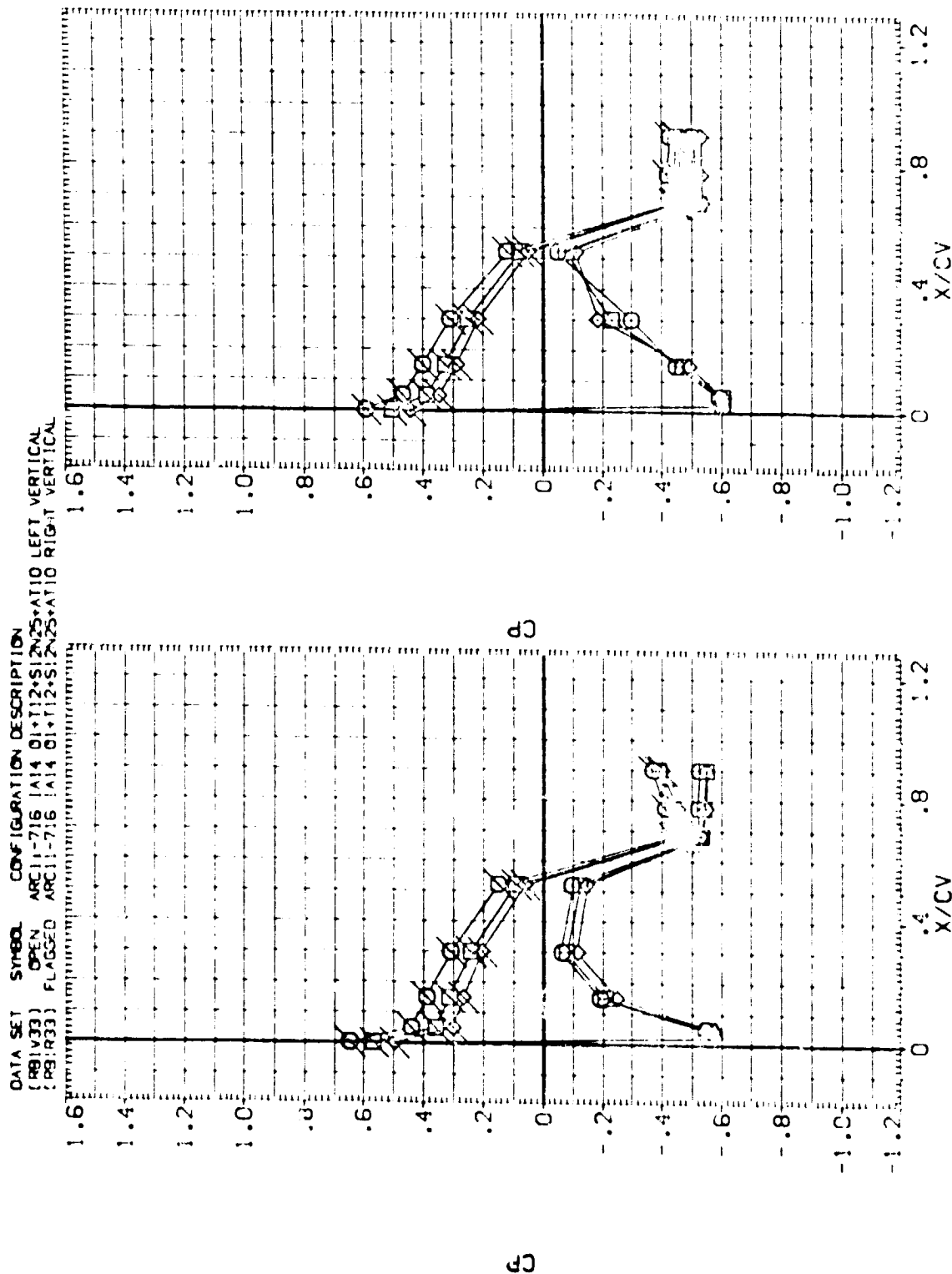
SYMBOL	ALPHA	Z/BV	BETAC	MACH	PARAMETRIC VALUES
○	4.30C	.158	4.080	ROOTER	1.250 ELEVON
□	7.91C	.316			000 SPEED
					000



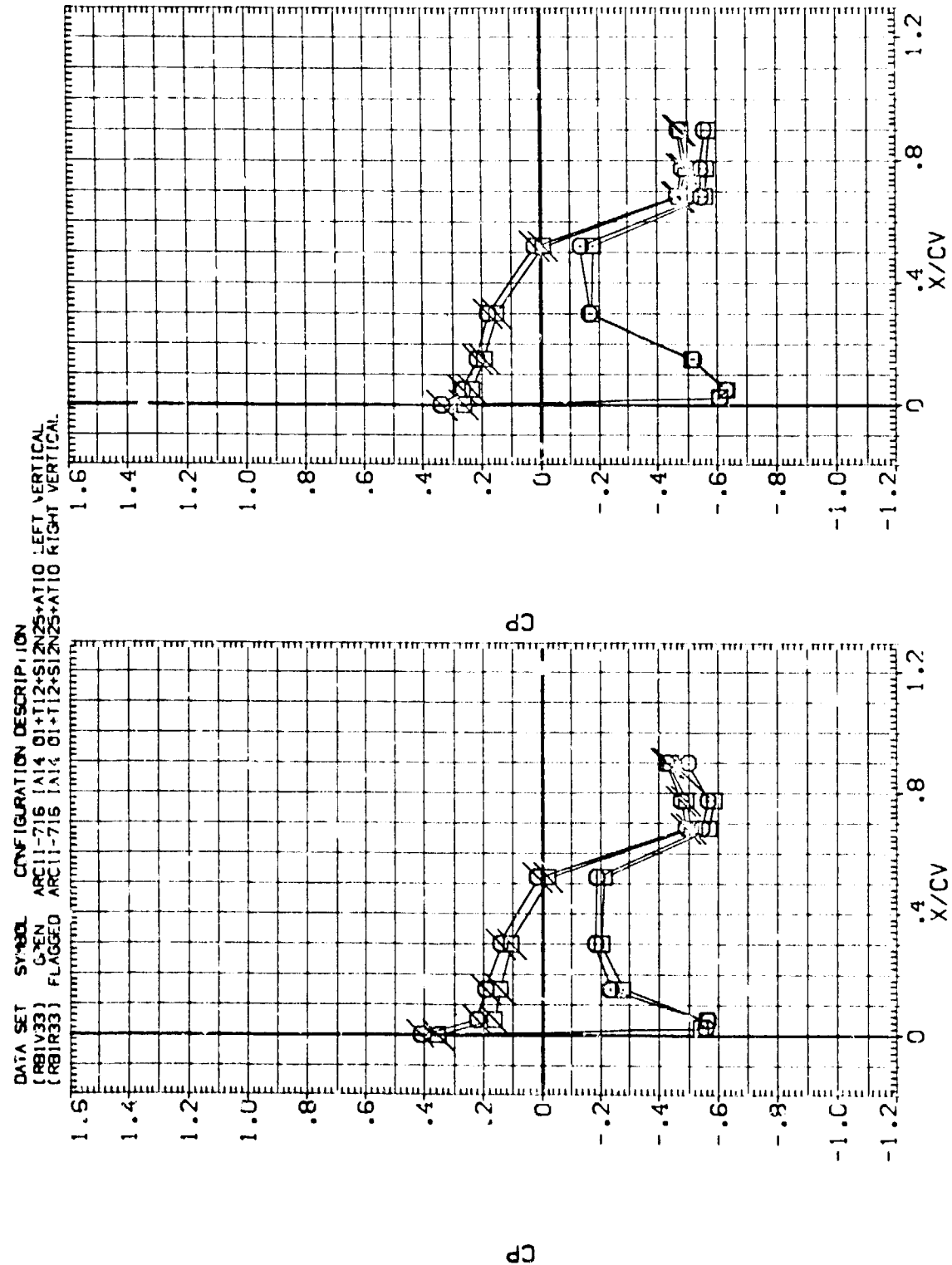
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000

SYMBOL ALPHA-0 Z/BV BETA-0
O -8.230 .500 4.080
I -4.200 .840
D -7.60



SYMBOL	ALPHA	Z/EV	BETA	MACH	PARAMETRIC VALUES
○	4.300	.600	4.080	RUDER	1.250 ELEVON .000
□	7.910	.840			.000 SPOBRK .000



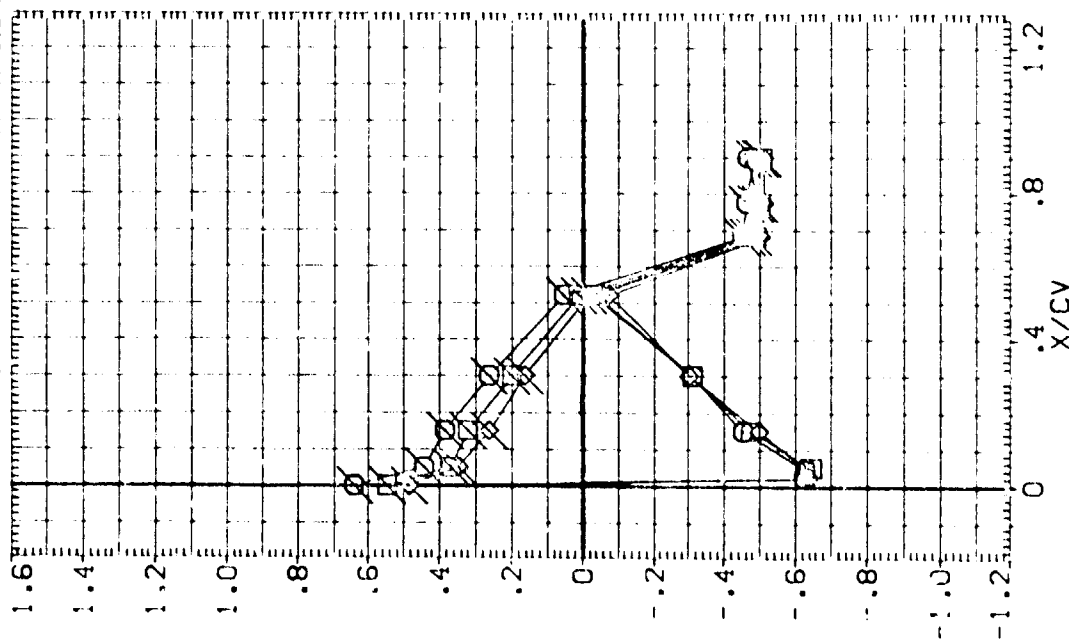
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOILER .000

MACH
 RUDDER

SYMBOL ALPHA Z/BV BETA0
 -8.220 .925 4.080
 -4.200
 -.760

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R31V33) OPEN ARC 11-716 1A14 01+112+S12N25+AT10 LEFT VERTICAL
 (R31R33) FLAGGED ARC 11-716 1A14 01+112+S12N25+AT10 RIGHT VERTICAL



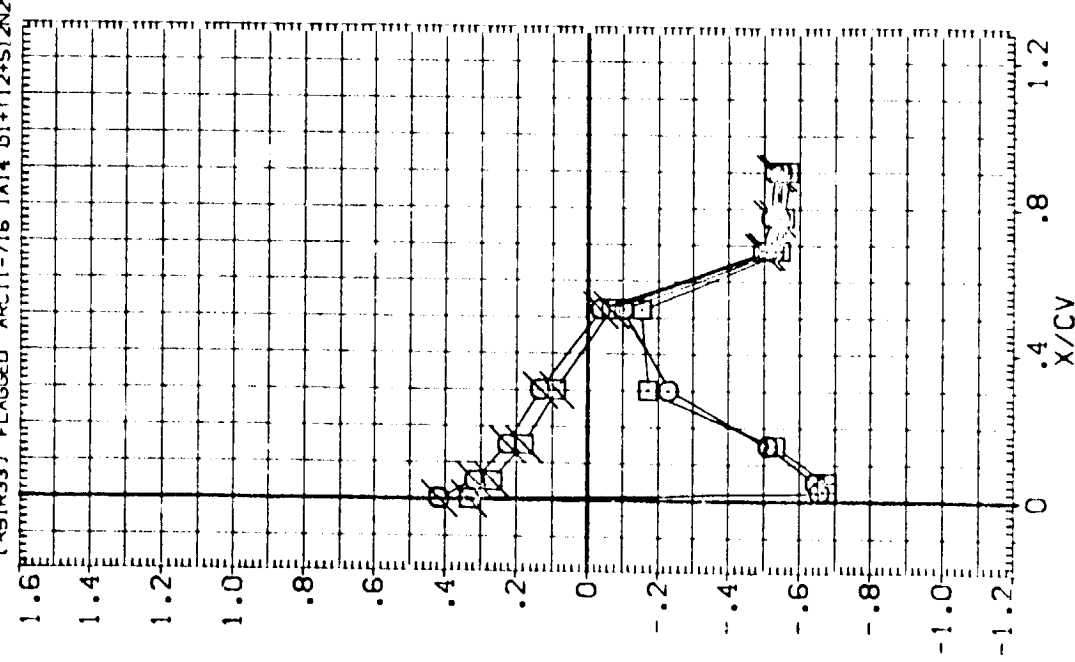
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA₀ Z/BV BETAS
 4.300 .925 4.080
 7.910

MACH 1.250 ELEVON .000
 RUDDER .000

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 1A14 01+T12-S12N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 1A14 01+T12-S12N25+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL

ALPHA

Z/BV

BETA

8.120

.158

.316

-.760

MACH

RUDDER

1.250

ELEVON

.000

SPOBRK

.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(RB:V33)

OPEN

ARC11-716

1A14

01+112+512+25+ATIO

LEFT VERTICAL

(RB:R33)

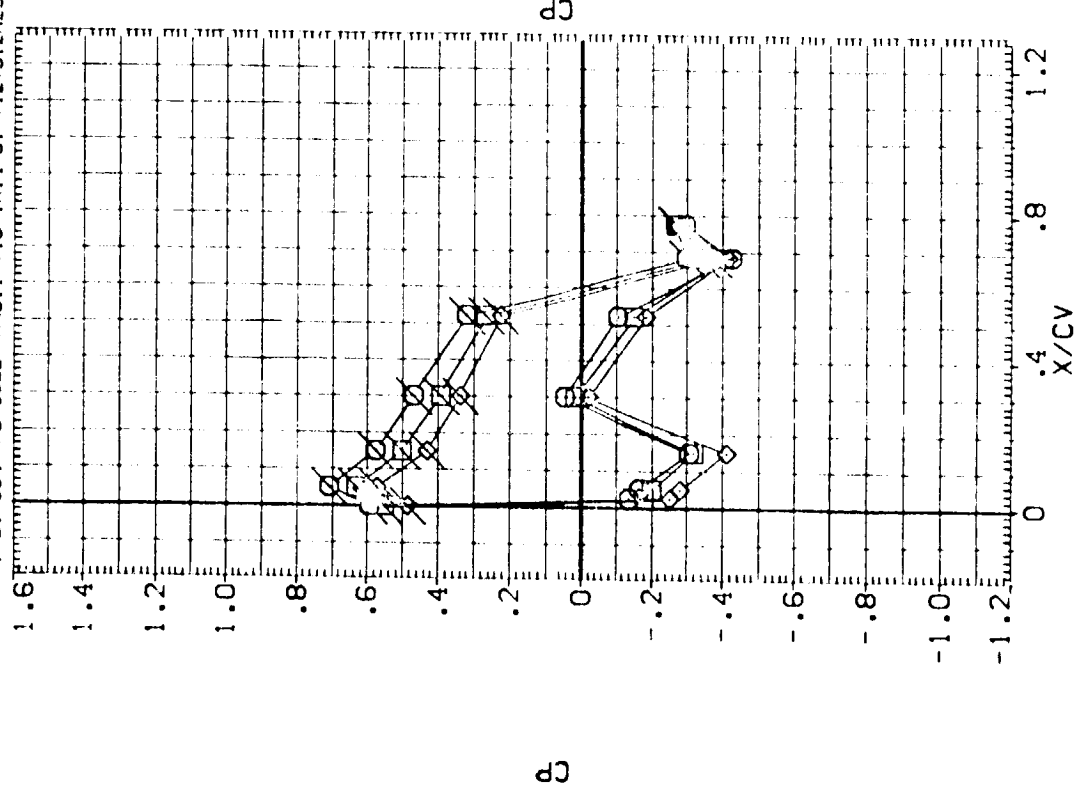
FLAGGED

ARC11-716

1A14

01+112+512+25+ATIO

RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL
○
□

ALPHA 0
4.300
7.910

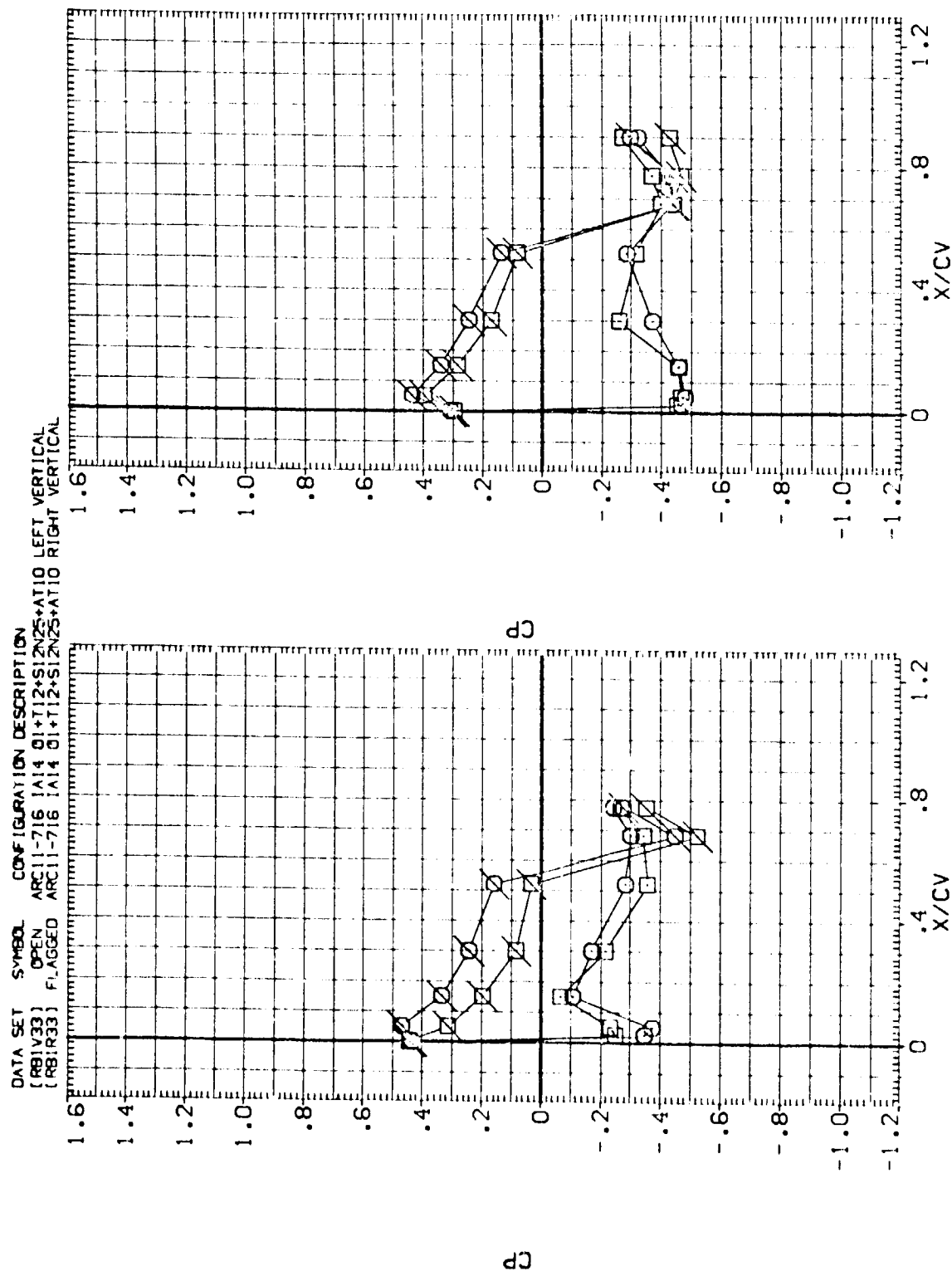
Z/BV
.158
.316

BETA 0
8.120

MACH
1.250

RUDDER
.000

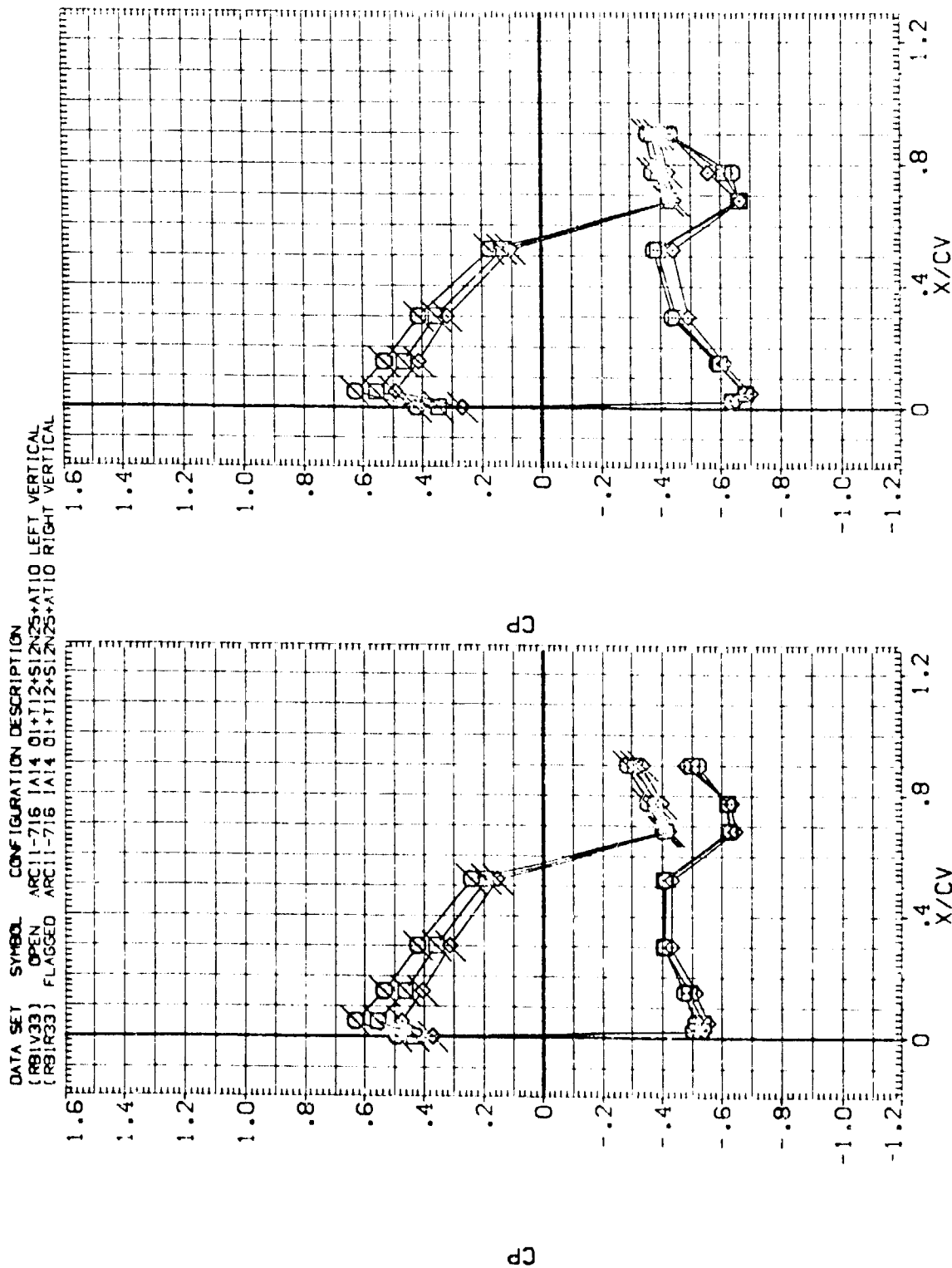
PARAMETRIC VALUES
ELEVON
SPOBRK



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000

SYMBOL ALPHA0 Z/BV BETA0
 -8.220 .600 8.120
 -4.200 .840
 -.760



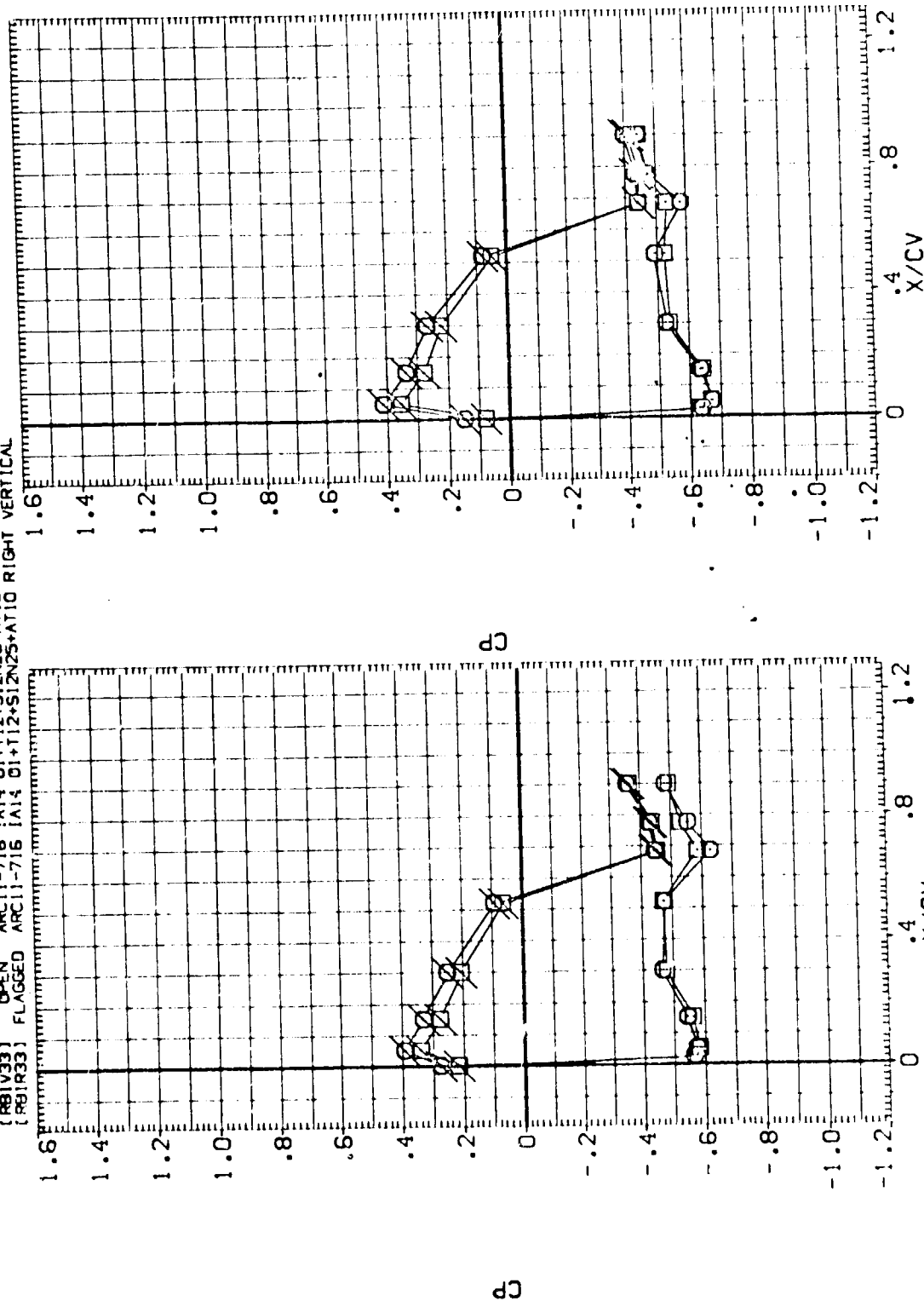
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPDGRK .000

MACH
 RUDDER

SYMBOL ALPHA Z/BV BETA
 4.300 .600 9.120
 7.910 .840

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 [A14 01+112+512N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 [A14 01+112+512N25+AT10 RIGHT VERTICAL



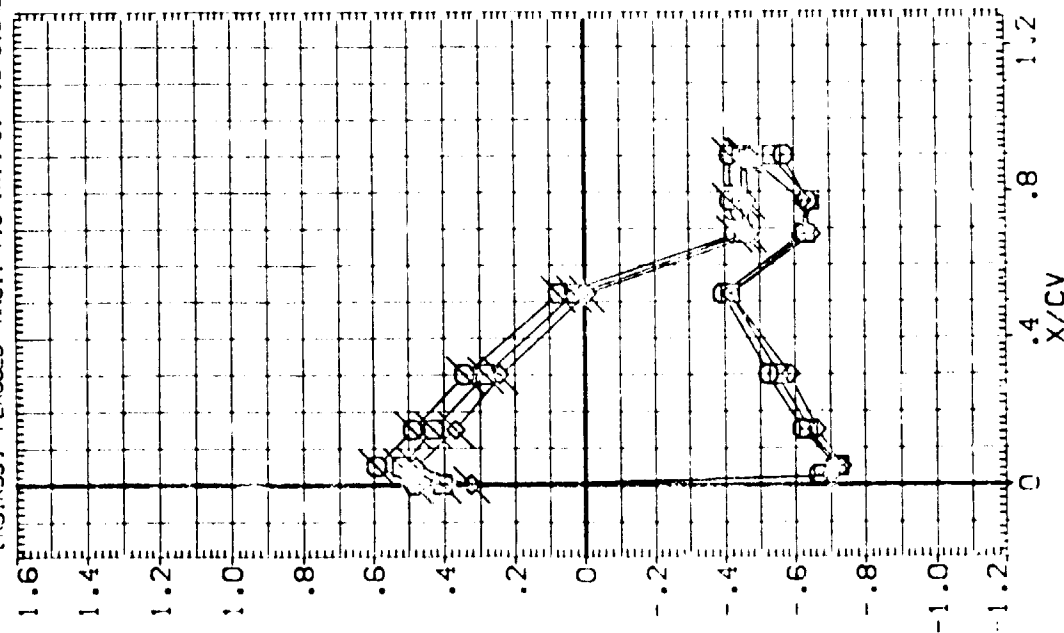
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

MACH
 RUDDER

SYMBOL ALPHA0 Z/BV BETA0
 -8.70 .925 8.120
 -4.200
 -.760

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81V33) OPEN ARC11-716 :A14 01+T12+S12N25+AT10 LEFT VERTICAL
 (R81R33) FLAGGED ARC11-716 :A14 01+T12+S12N25+AT10 RIGHT VERTICAL



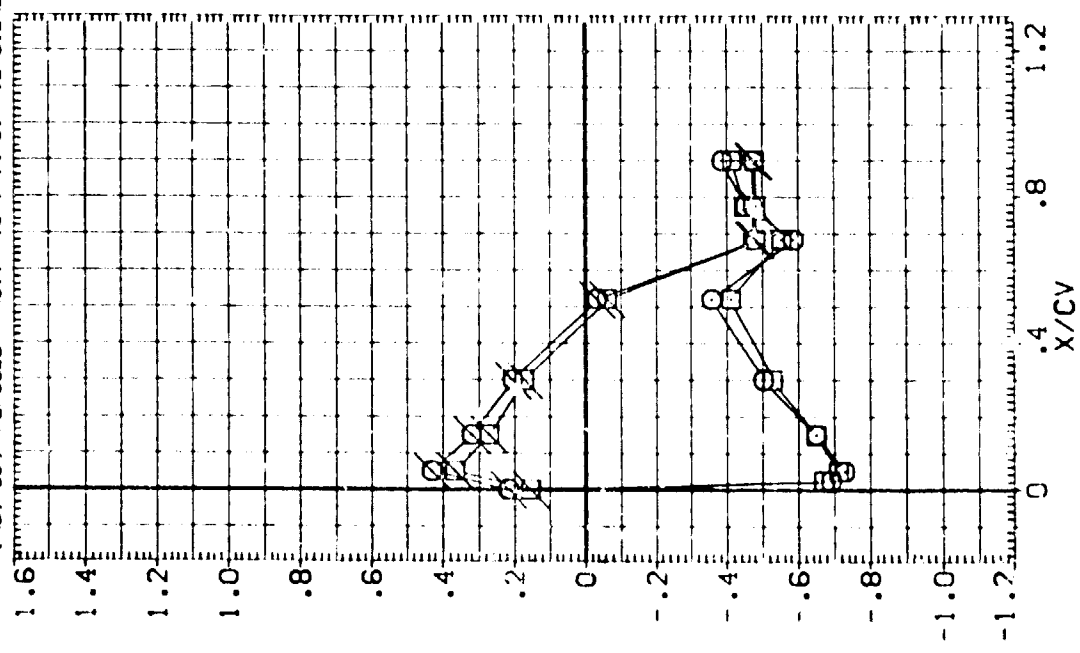
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA Z/BV BETA
 4.300 .925 8.120
 7.910

MACH
 RUDDER

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOILER
 .000

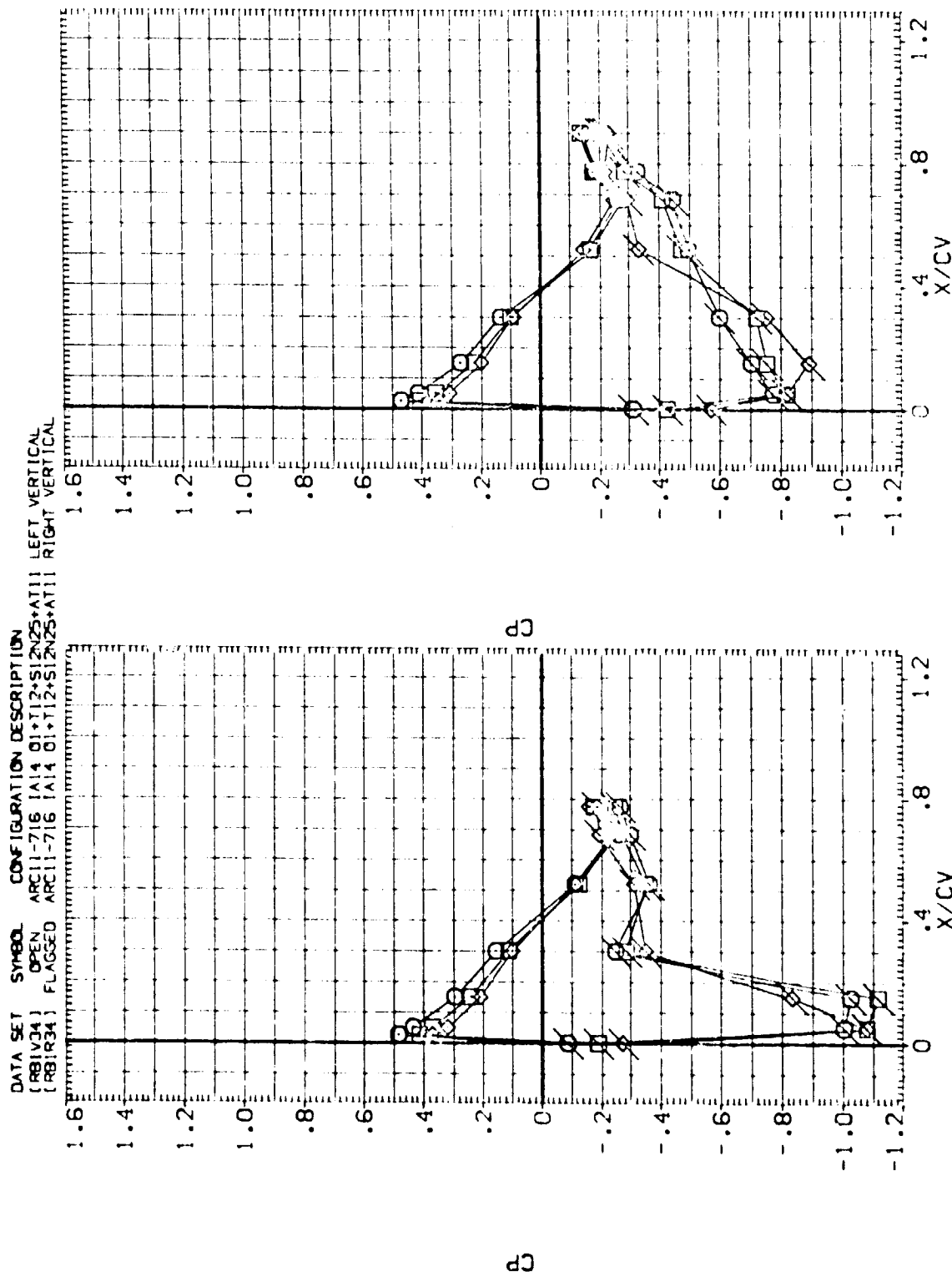
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V33) OPEN ARC11-716 [A14 01+112+SI2N25+AT10 LEFT VERTICAL
 (RB1R33) FLAGGED ARC11-716 [A14 01+112+SI2N25+AT10 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

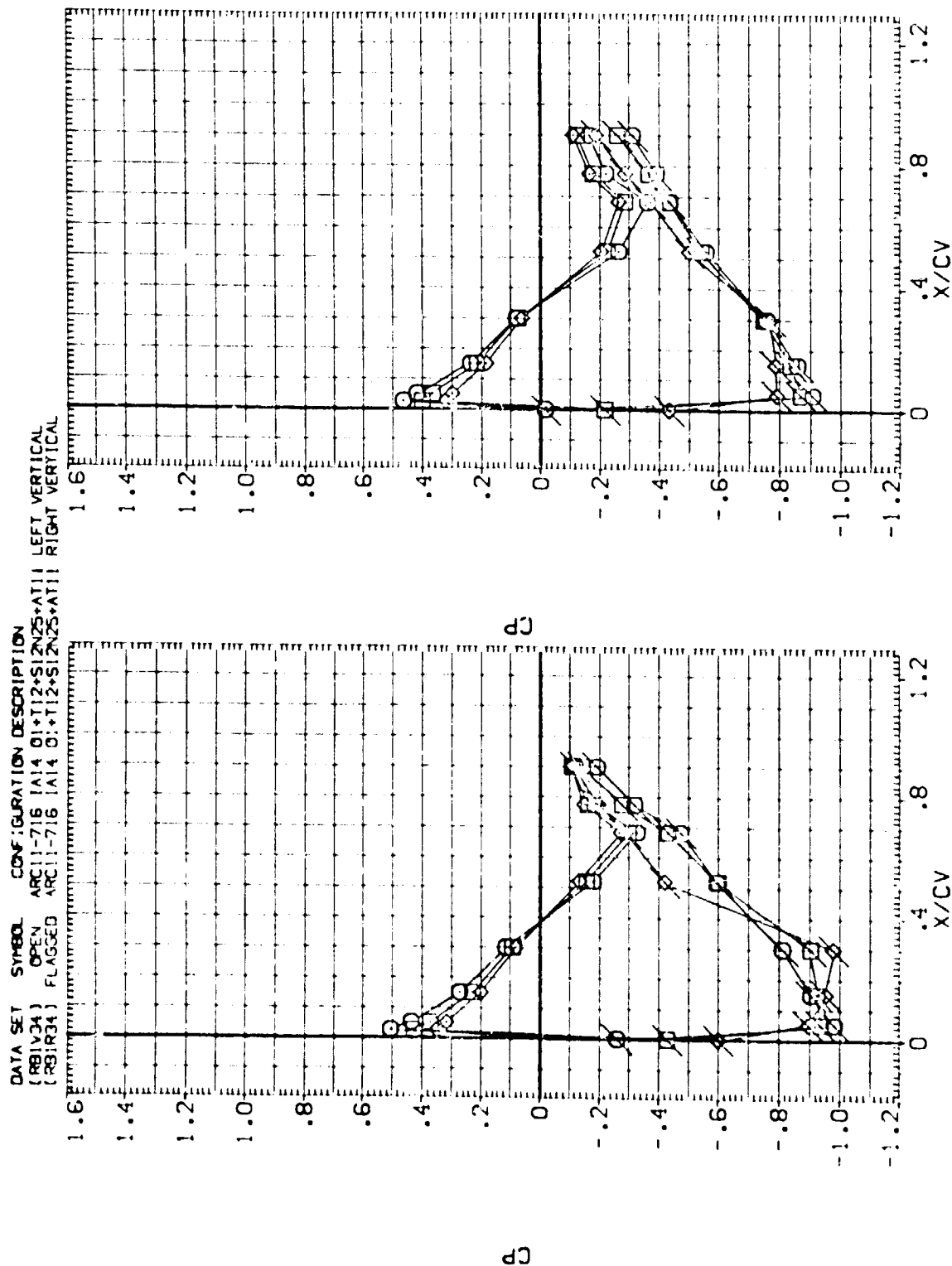
PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000 SPODBRK .000

SYMBOL ALPHA₀ Z/BV BETA₀
○ -8.010 .156 -7.980
□ -3.10 .316
◇ 7.690



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA 3	Z/BV	BETA 0	MACH	PARAMETRIC VALUES
○	-3.013	.600	-7.980	RUDER	.600 ELEVON .000
□	-3.313	.840			.000 SPD3RK .000
◇	7.890				

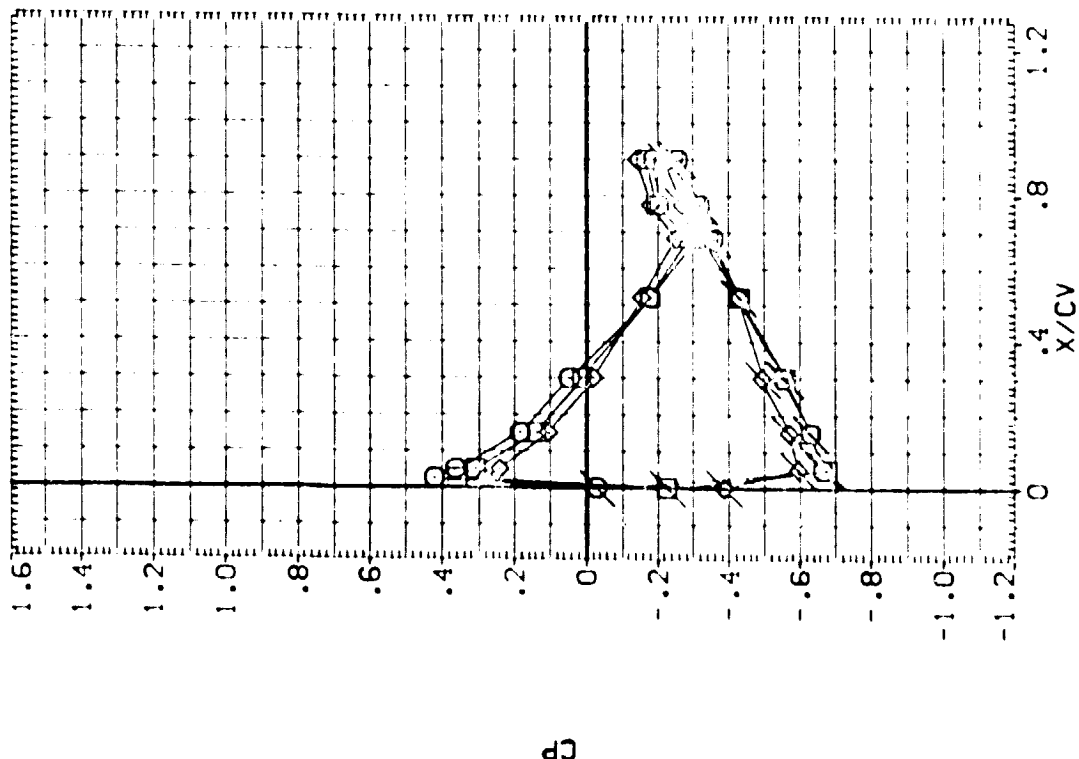


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH .600 ELEVON .000
 RUDDER .000

SYMBOL ALPHA0 Z BV BETA0
 O -8.010 .925 -7.980
 □ -1.310
 ◇ 7.830

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V34) OPEN ARC11-716 1A14 01+112+512N25+AT11 LEFT VERTICAL
 (RB1R34) FLAGGED ARC11-716 1A14 01+112+512N25+AT11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH .600 ELEV/CM .000
 RUDDER .000 SPEED/CM .000

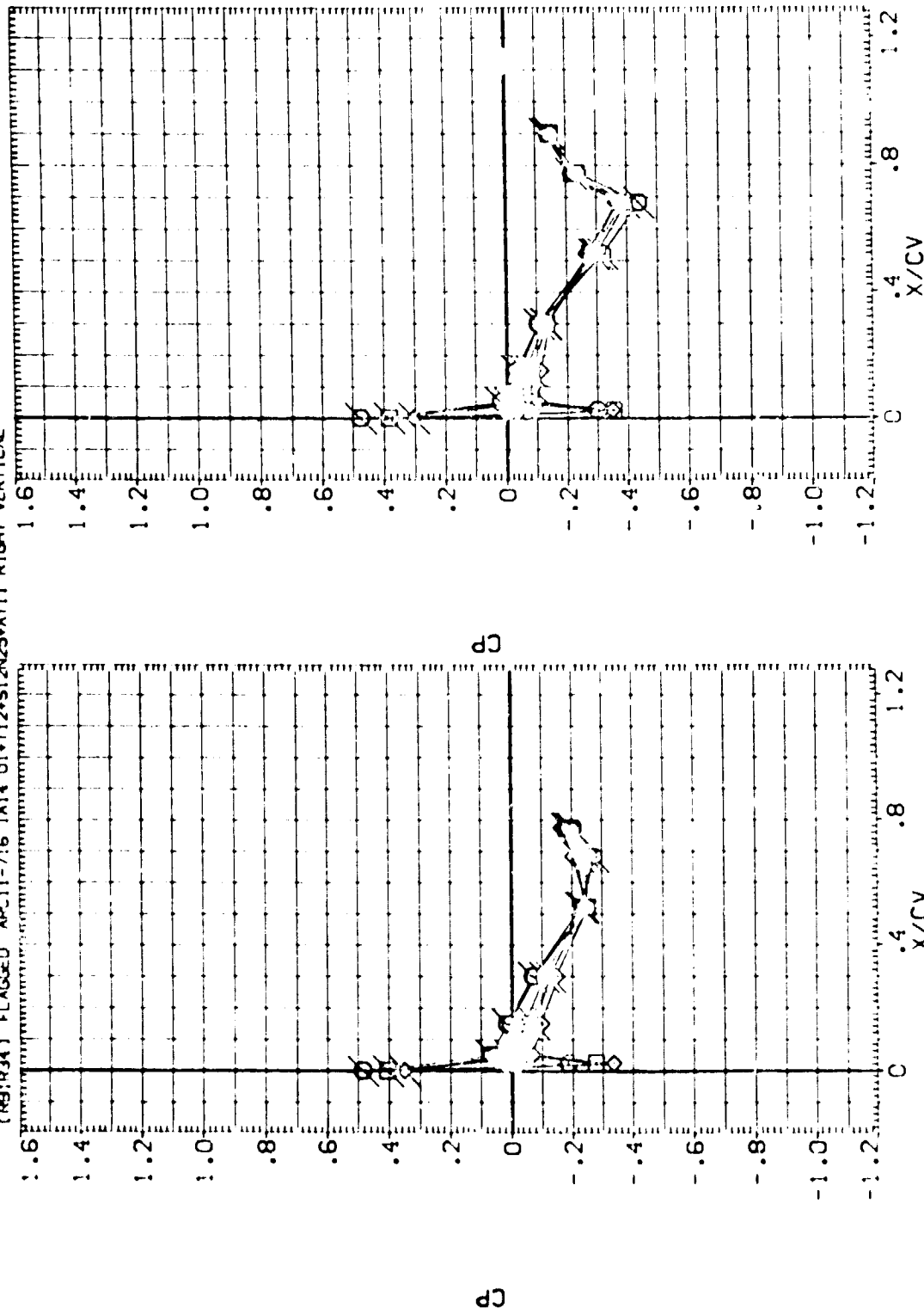
ALPHA
 -8.010
 -3.310
 7.890

BETA
 .158
 .316

Z/BV
 .158
 .316

SYMBOL
 ○ □ ◇

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R81V34) OPEN ARC11-716 [A14 0] T12-S12N25+AT11 LEFT VERTICAL
 (R81V34) FLAGGED ARC11-716 [A14 0] T12-S12N25+AT11 RIGHT VERTICAL

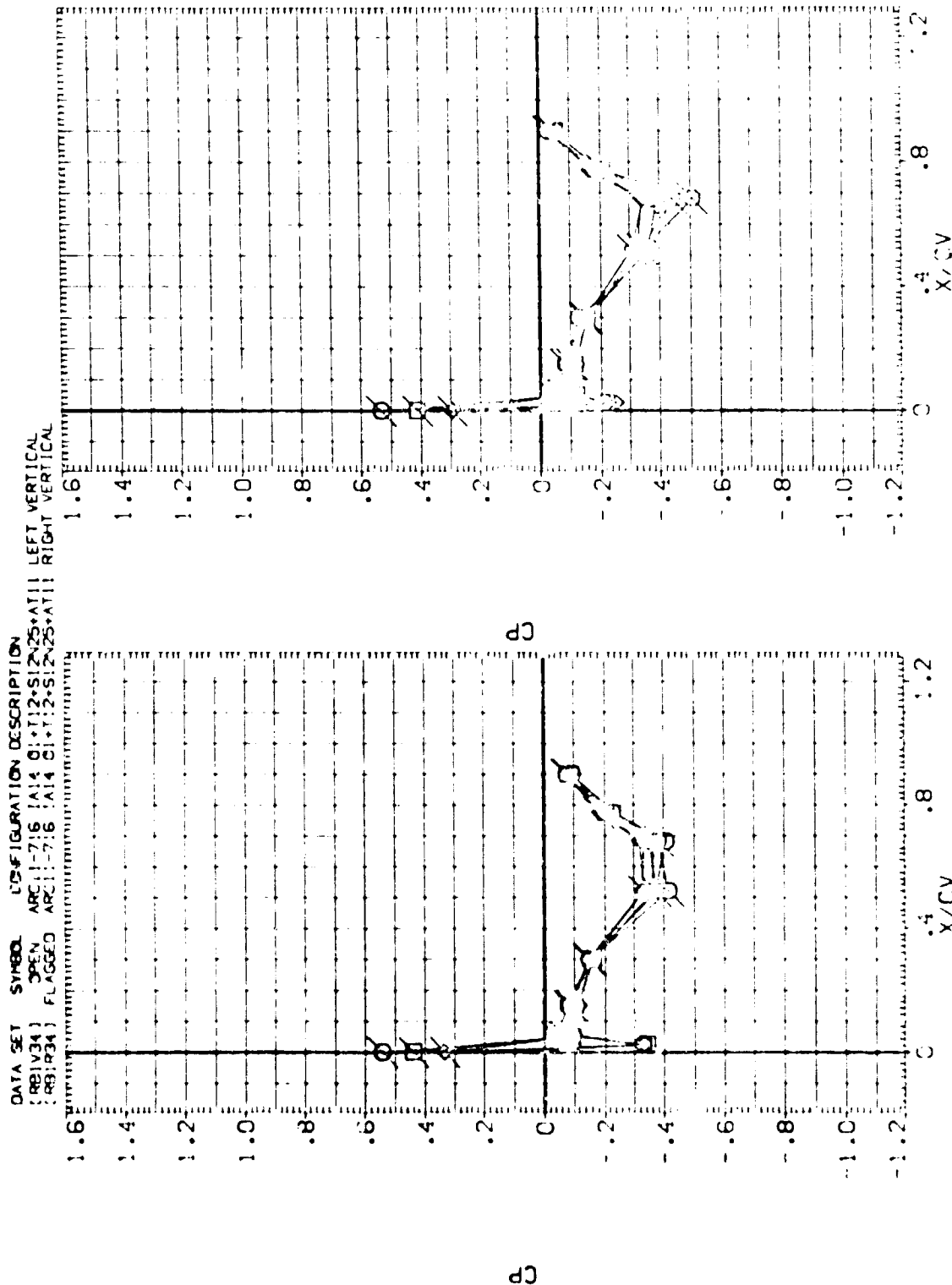


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA0 Z/BV BETA0
 -8.010 .600 .030
 -.310 .840
 7.850

MACH
 RUDDER

PARAMETRIC VALUES
 .600 ELEVON
 .030 SPOILER



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL
○ □ ◇

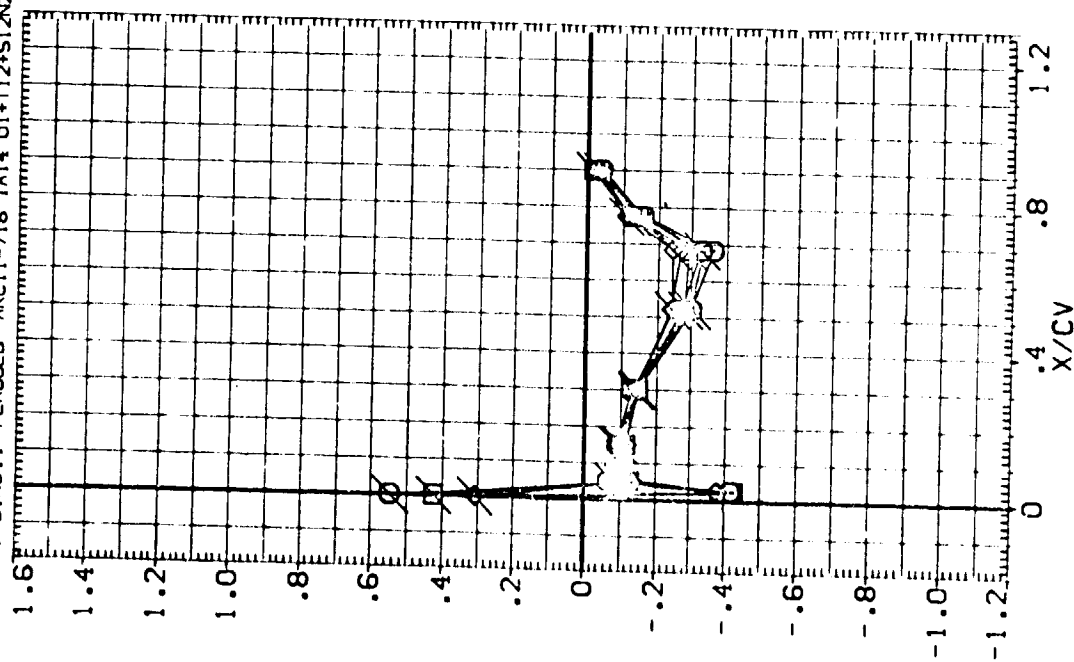
ALPHA
-8.010
-3.310
7.690

Z/BV .925
BETA0 .030

MACH
RUDDER

PARAMETRIC VALUES
.600 ELEVON
.000 SPDBRK
.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R8) (V34) OPEN ARC11-716 (A14 01+112+512N25+AT11 LEFT VERTICAL
(R8) (R34) FLAGGED ARC11-716 (A14 01+112+512N25+AT11 RIGHT VERTICAL

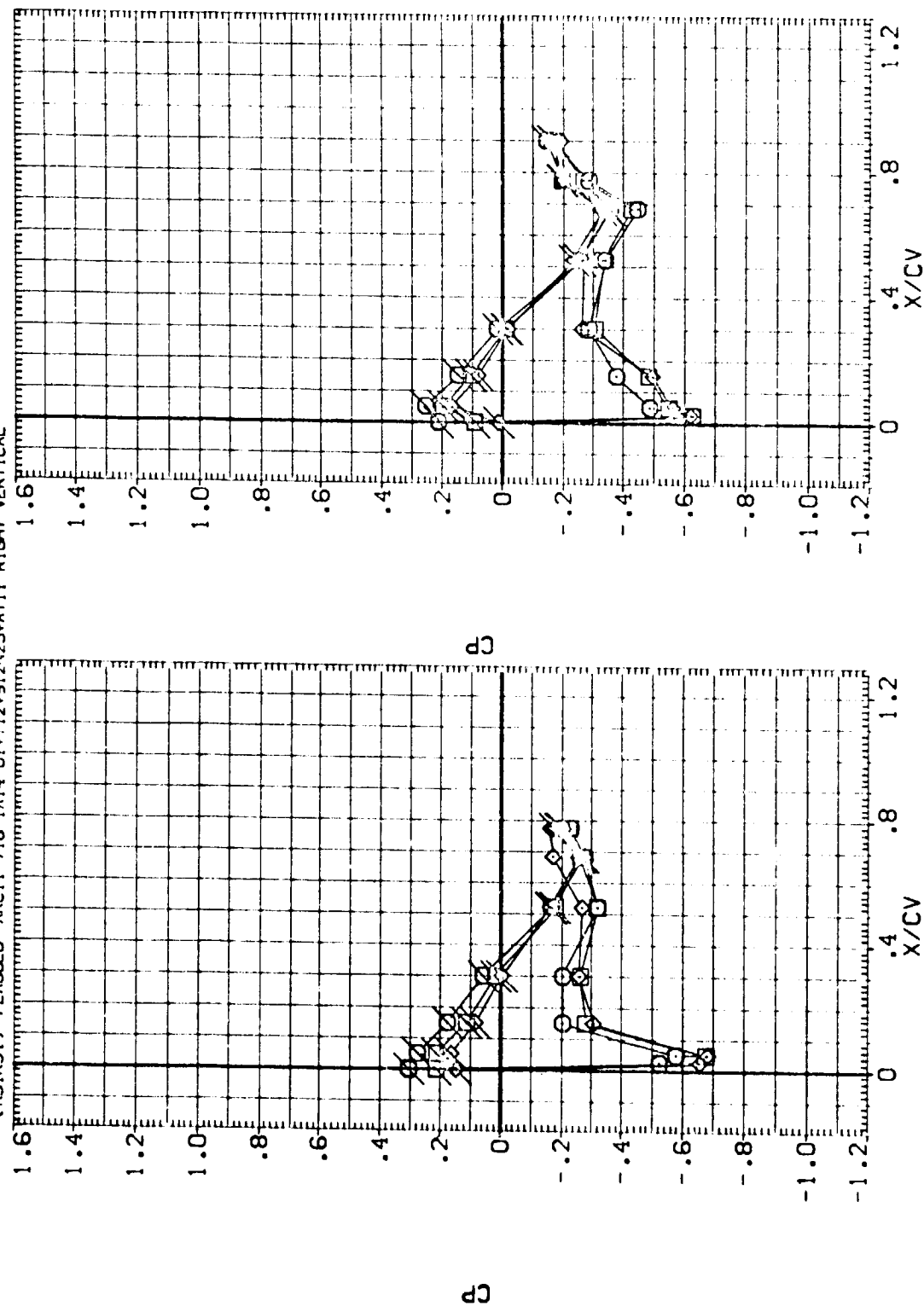


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000 SPEEDBRK .000

SYMBOL ALPHA-AD Z/BV BETA-AD
○ -8.010 .158 4.090
□ -3.10 .316
◇ 7.890

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RB1V34) OPEN ARC11-716 [A14 01+T12+S12N25+AT11 LEFT VERTICAL
(RB1R34) FLAGGED ARC11-716 [A14 01+T12+S12N25+AT11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 .000 ELEVON
 .000 SPOILER

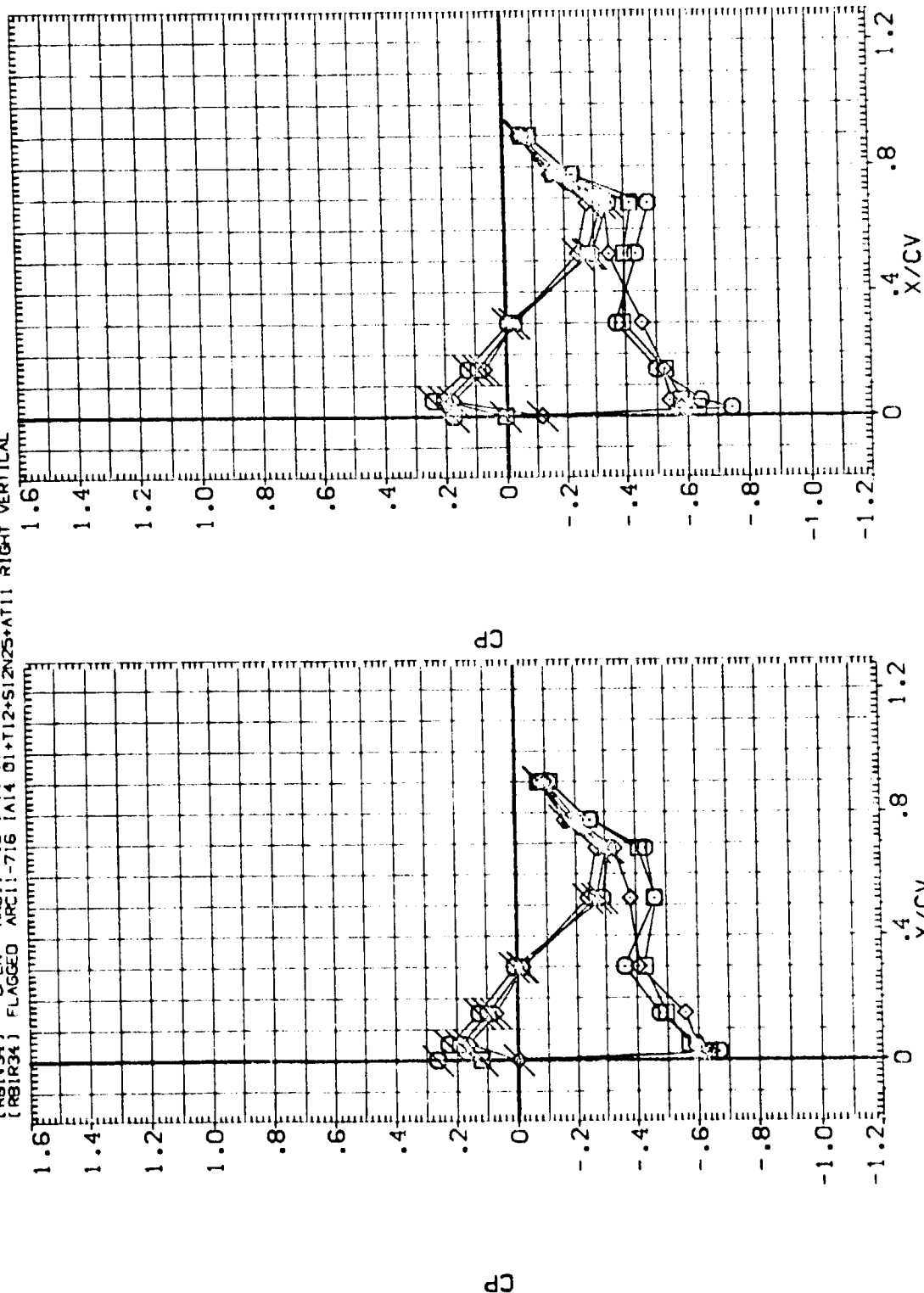
MACH
 RUDDER

ALPHA
 -8.010
 -3.310
 7.890

BETA
 4.090

Z/BV
 .600
 .840

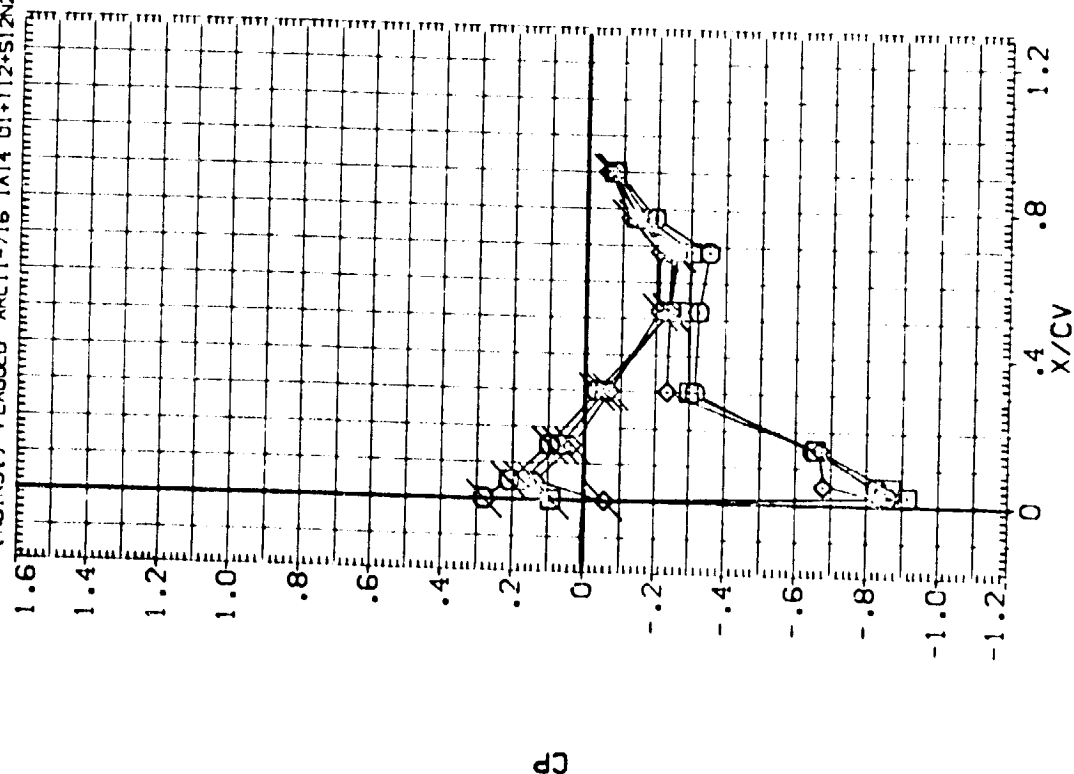
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V34) OPEN ARC11-716 |A14 01+T12+S1Z25+AT11 LEFT VERTICAL
 (RB1R34) FLAGGED ARC11-716 |A14 01+T12+S1Z25+AT11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA0	Z/BV	BETA0	MACH	PARAMETRIC VALUES
○	-8.010	.925	4.090	RUDDER	.600 ELEVON
□	-.310				.000 SFDBRK
◇	7.690				.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(RB1V34)	OPEN	ARC11-716 [A14 01+112+512N25+AT11 LEFT VERTICAL
(RB1R34)	FLAGGED	ARC11-716 [A14 01+112+512N25+AT11 RIGHT VERTICAL

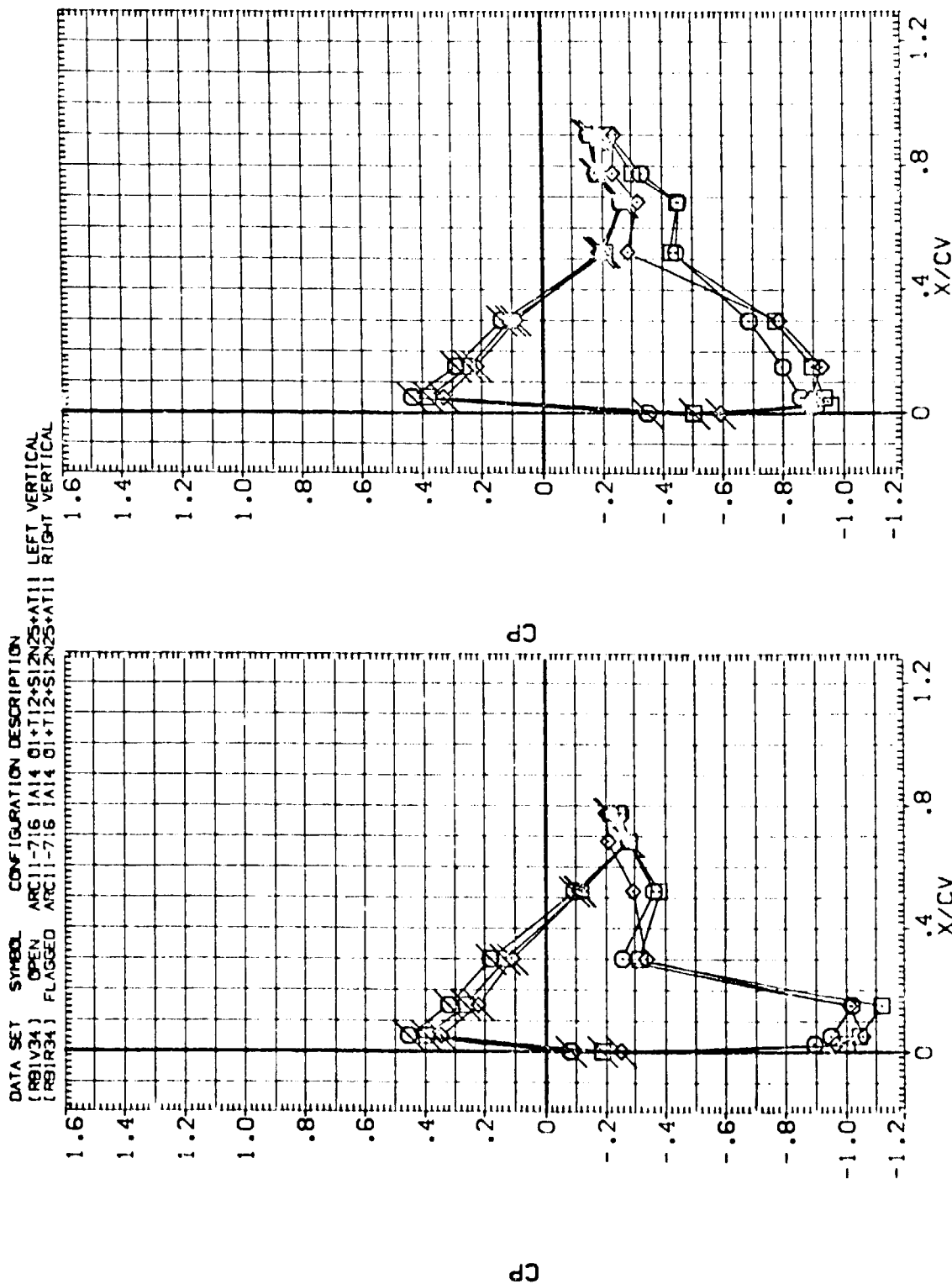


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 .600 ELEVON
 .000 SPOILER
 .000

MACH
 RUDDER

SYMBOL ALPHA Z/BV BETA
 -8.010 .158 8.130
 -3.310 .316
 7.690

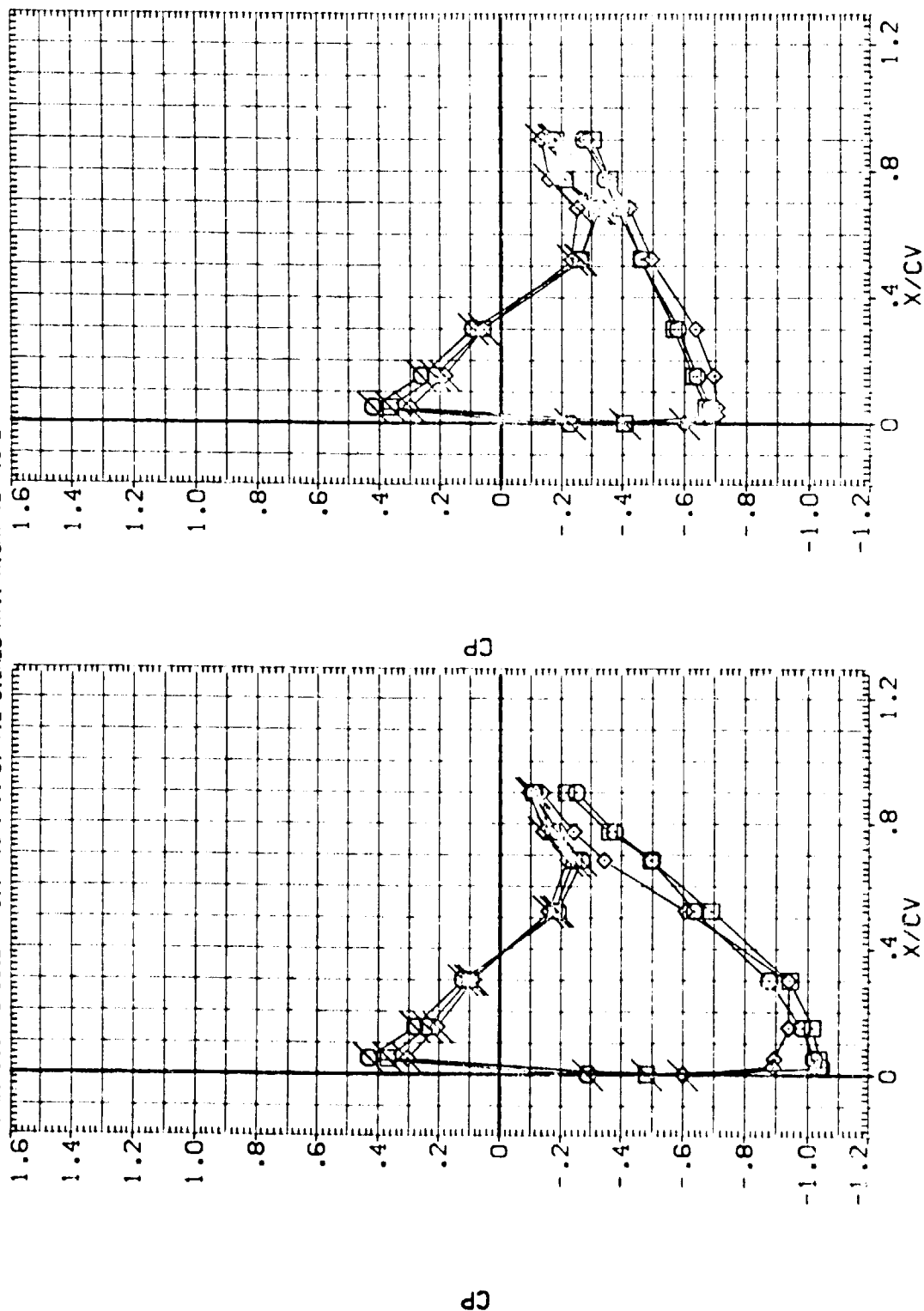


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
MACH .600 ELEVON .000
RUDDER .000 SPOILER .000

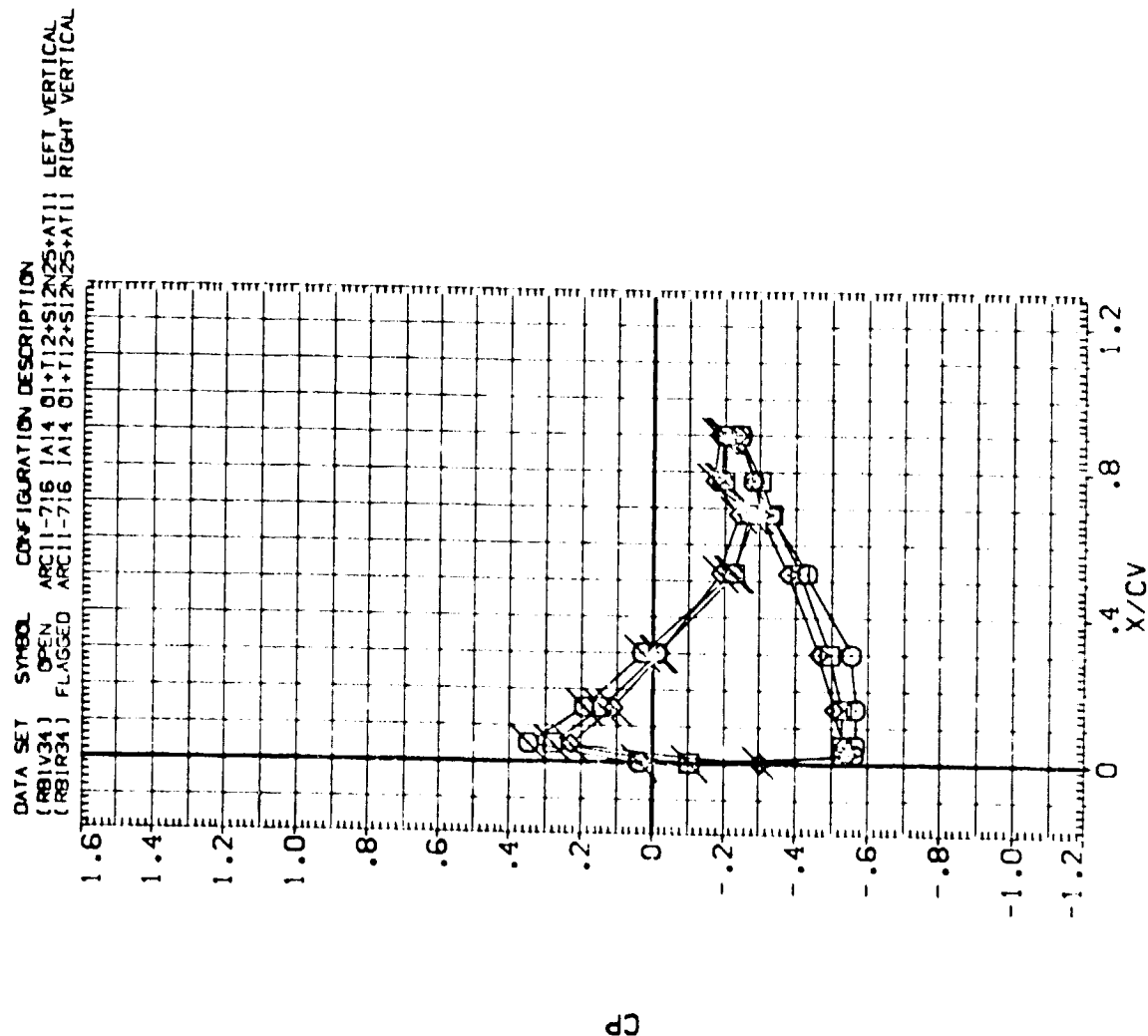
SYMBOL ALPHA0 Z/BV BETA0
-8.010 .600 8.130
-310 .840
7.850

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R81V34) OPEN ARC11-716 JA14 01+112-S12N25+AT11 LEFT VERTICAL
(R81R34) FLAGGED ARC11-716 JA14 01+112-S12N25+AT11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA0	Z/BV	BETA0	MACH	PARAMETRIC VALUES
○	-8.010	.925	8.130	RUDDER	.600 ELEVON .000
□	-.310				.000 SPOBRK .000
◇	7.890				

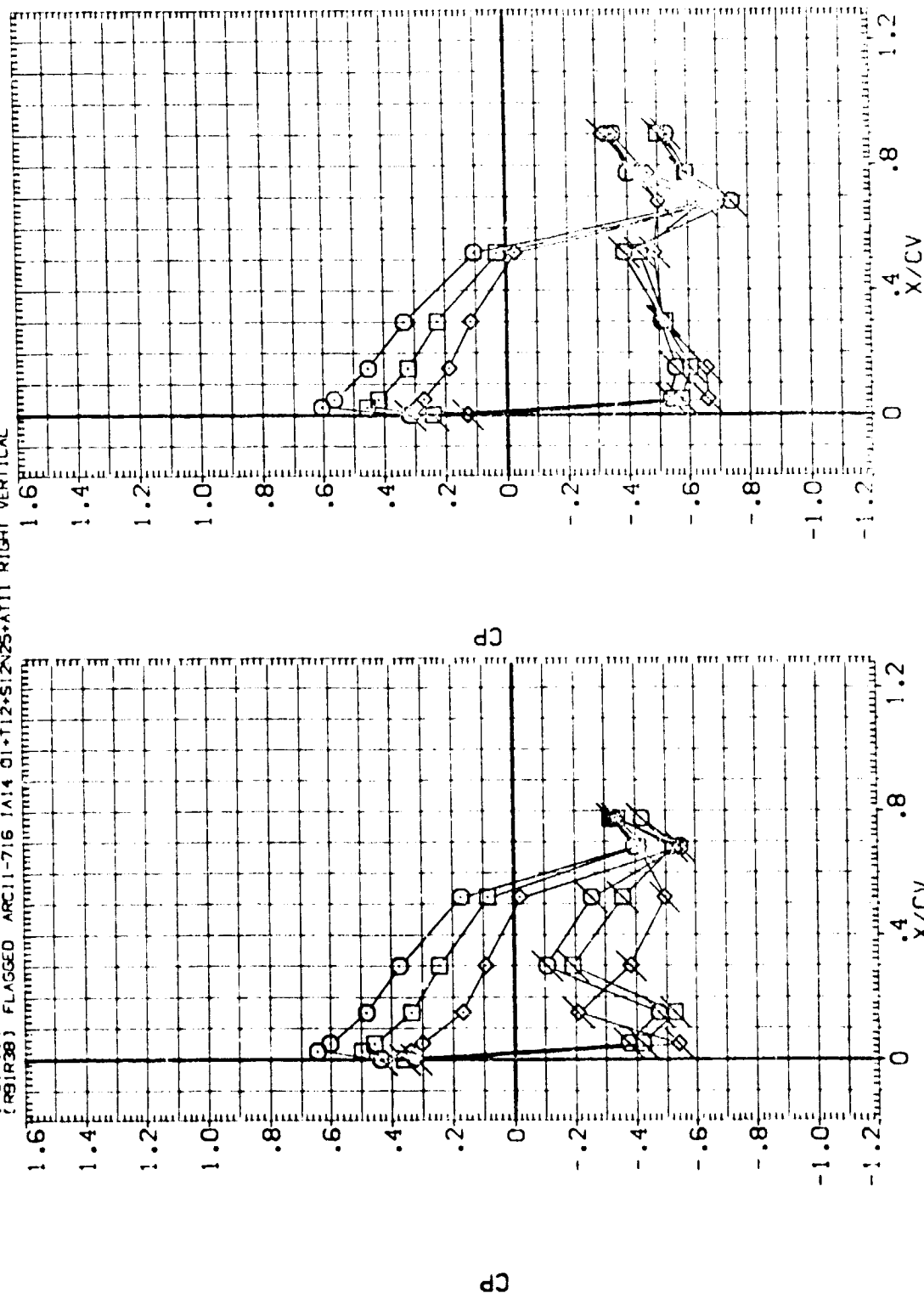


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
MACH 1.050 ELEVON .000
RUDDER .000

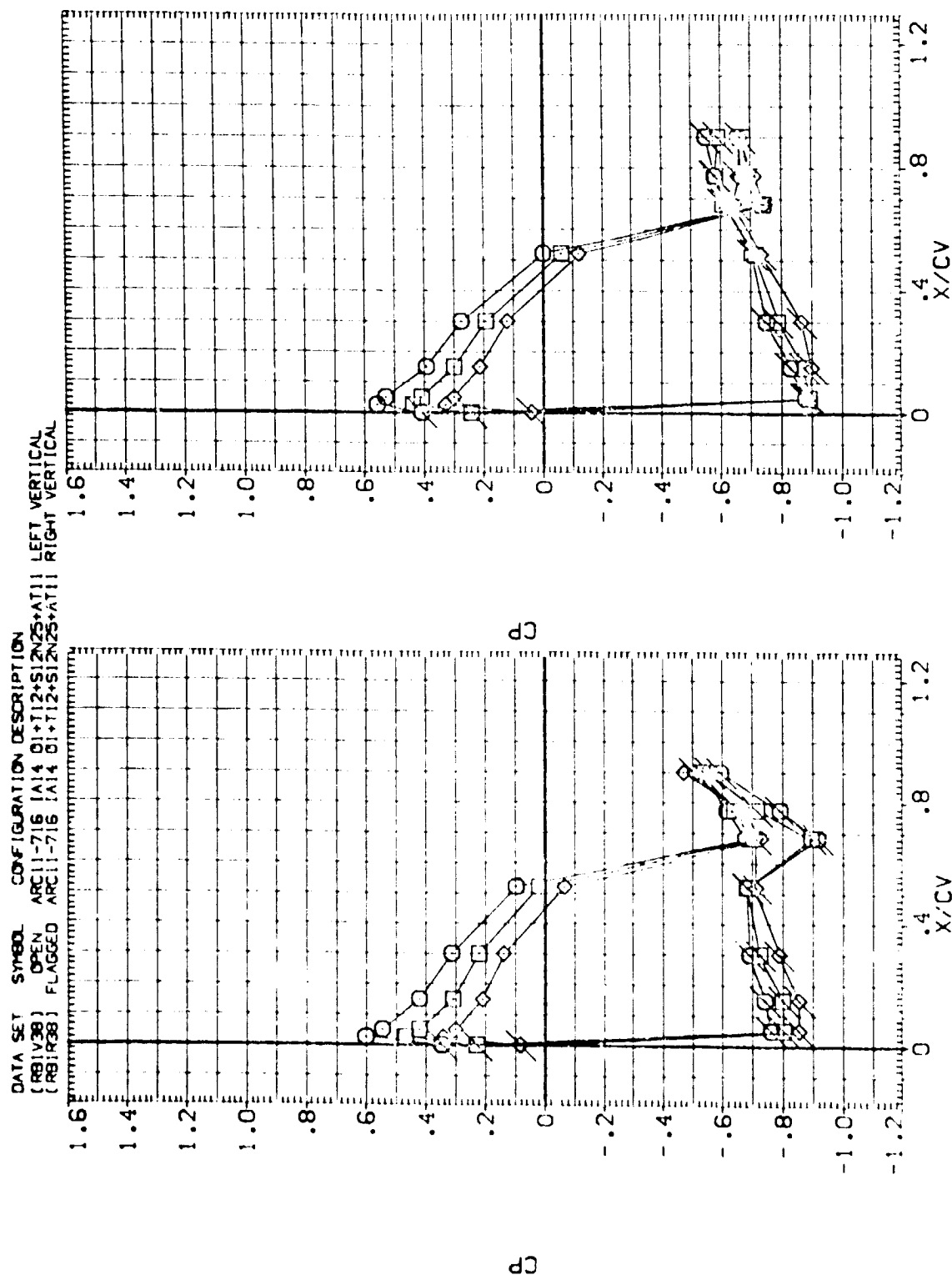
SYMBOL ALPHA0 Z/BV BETA0
○ -8.080 .158 -8.020
□ -3.310 .316
◇ 7.930

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RS1V38) OPEN ARC11-716 1A14 01-T12-S12ZS+AT11 LEFT VERTICAL
(RS1R38) FLAGGED ARC11-716 1A14 01-T12-S12ZS+AT11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

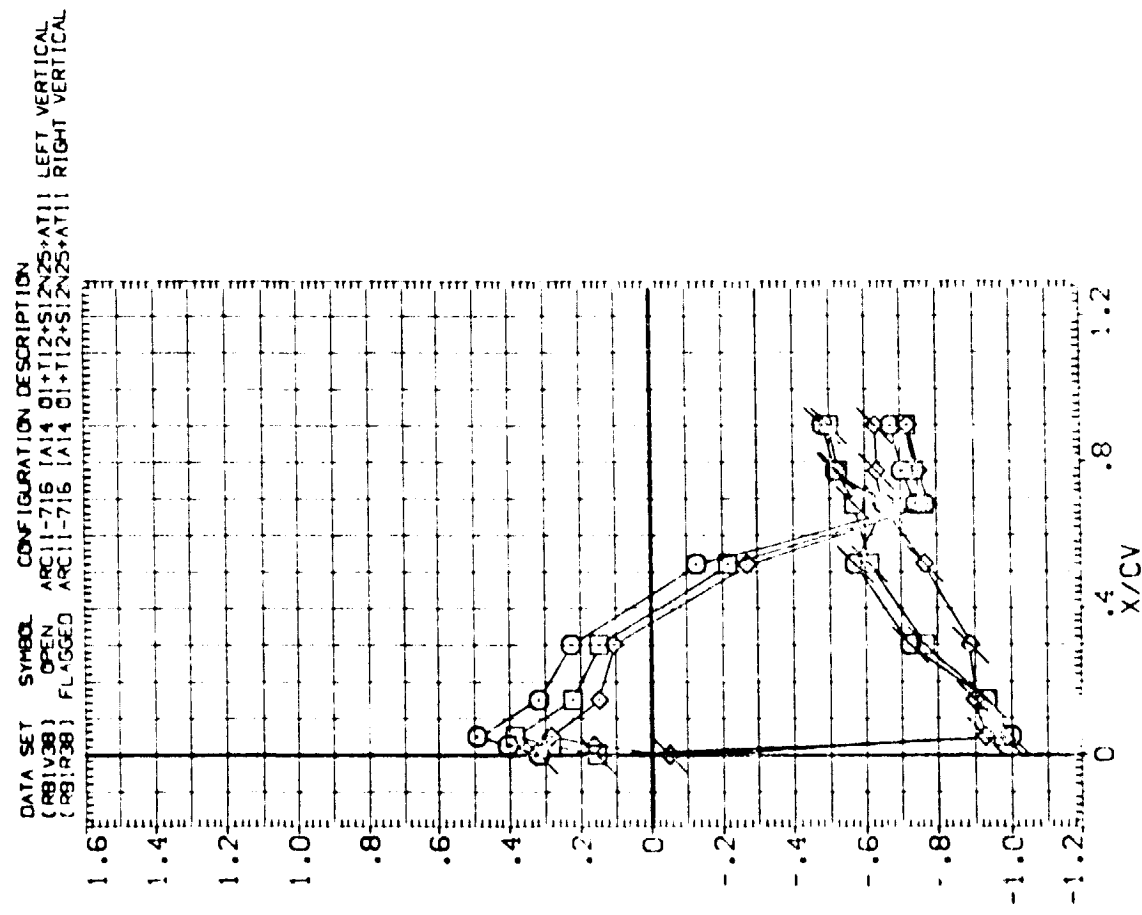
SYMBOL	ALPHA	Z/BV	BETA	MACH	PARAMETRIC VALUES
	-8.080	.600	-8.020	RUDDER	1.050
	-.310	.840			ELEVON
	7.930				SPDRK
					.000
					.000



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

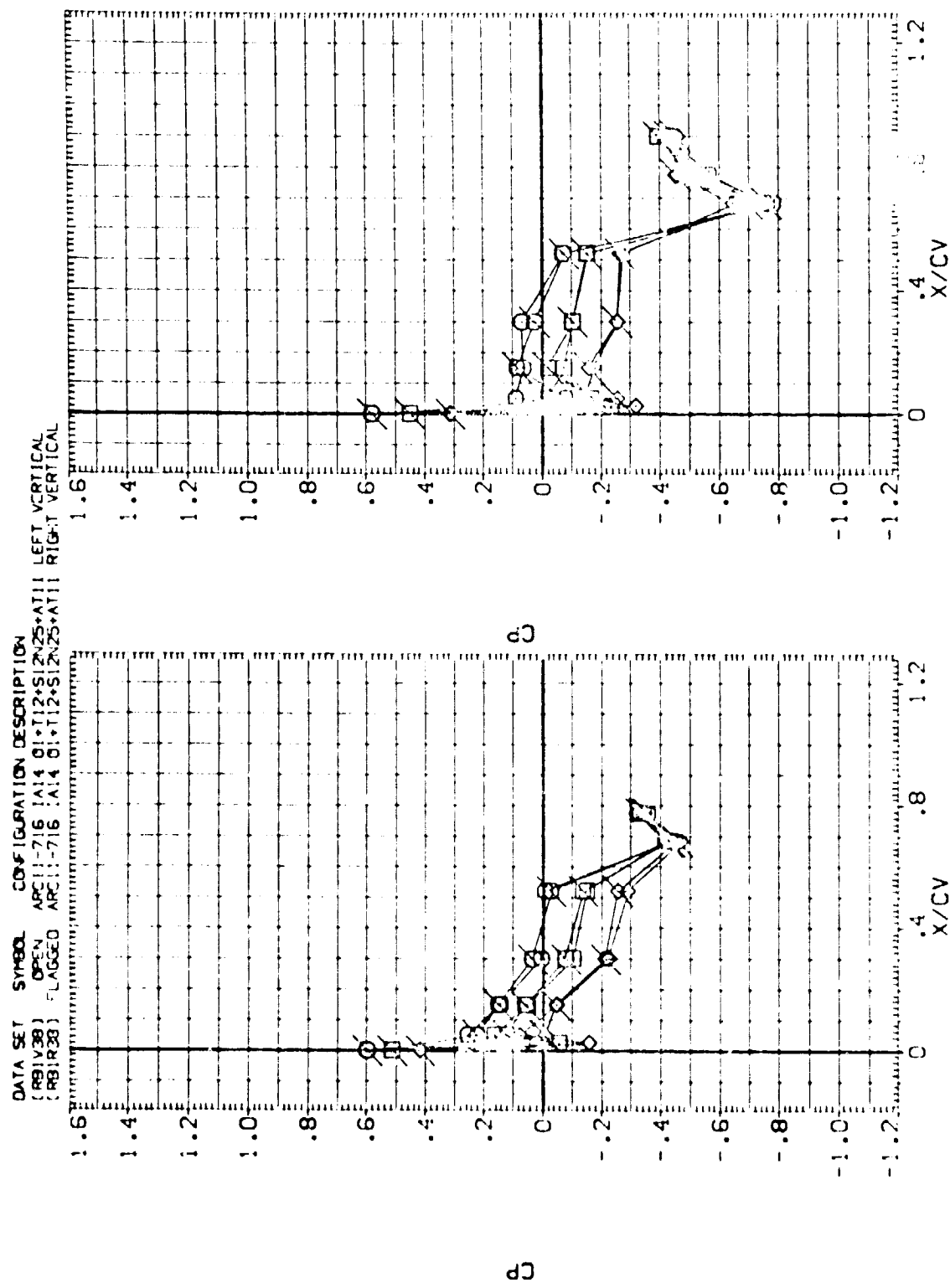
SYMBOL ALPHA0 Z/BV BETA0
 ○ -8.080 .925 -8.020
 □ -3.10
 ◇ 7.930

PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 RUDDER .000 SPOBRK .000



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

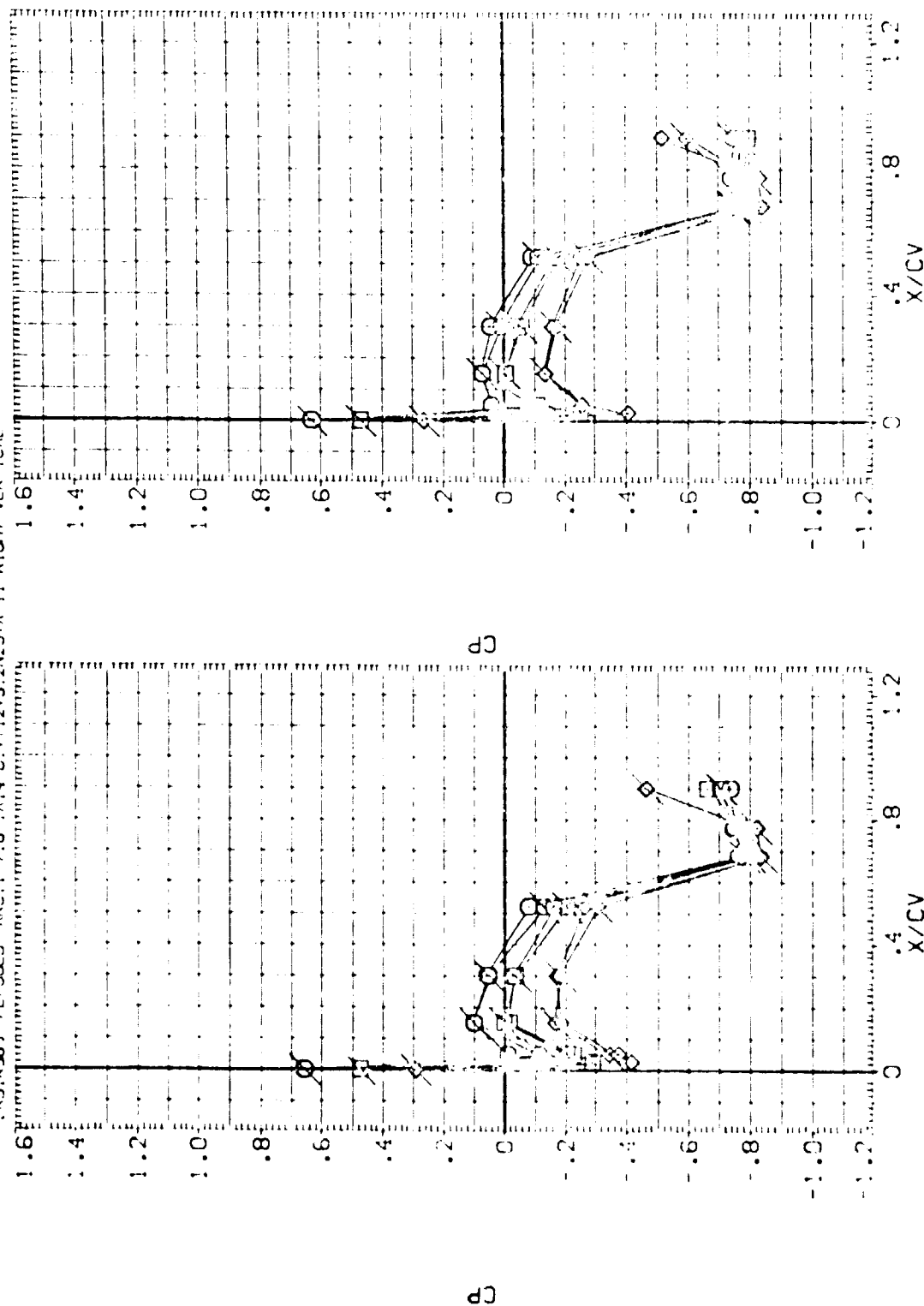
Symbl	ALPHA	Z/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.080	.158	.030	RUDDER	1.050 ELEVON
◇	-7.930	.316			.000 SPOILER



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL MEASURES

SYMBOL	ALPHA	Z/BV	BETA	PARAMETRIC VALUES		
○	-8.080	.500	.030	MACH	1.050	ELEVON
□	-3.10	.840		RUDDER	.000	SPORON
◇	7.930					.000

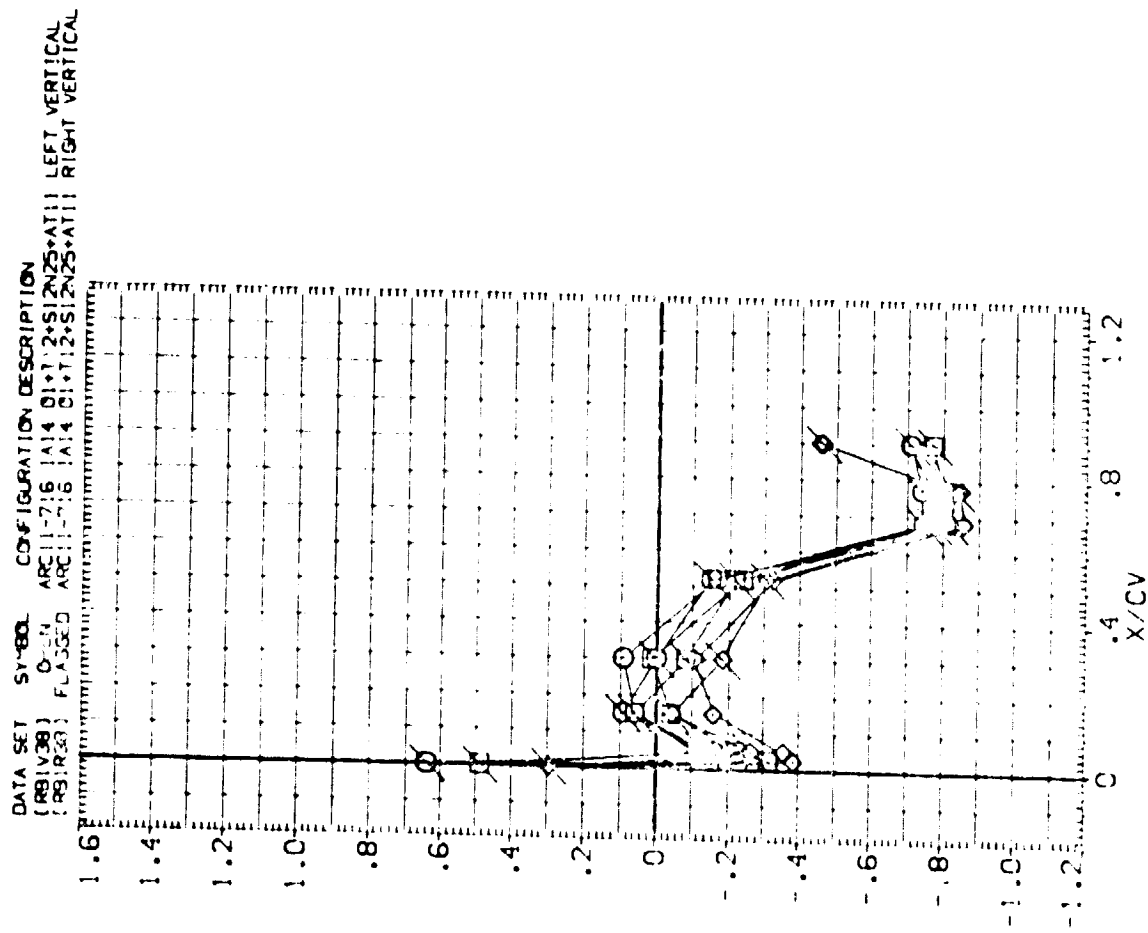
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R31V38) OPEN ARC11-716 [A14 01+Y12+S12N25+AT1] LEFT VERTICAL
 (R31R38) FLAGGED ARC11-716 [A14 01+Y12+S12N25+AT1] RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA Z/BV BETA
 O -8.080 .925 .030
 □ -3.10
 ◇ 7.930

MACH .000
 RUDDER .000
 PARAMETRIC VALUES
 ELEVON .000
 SPEED .000



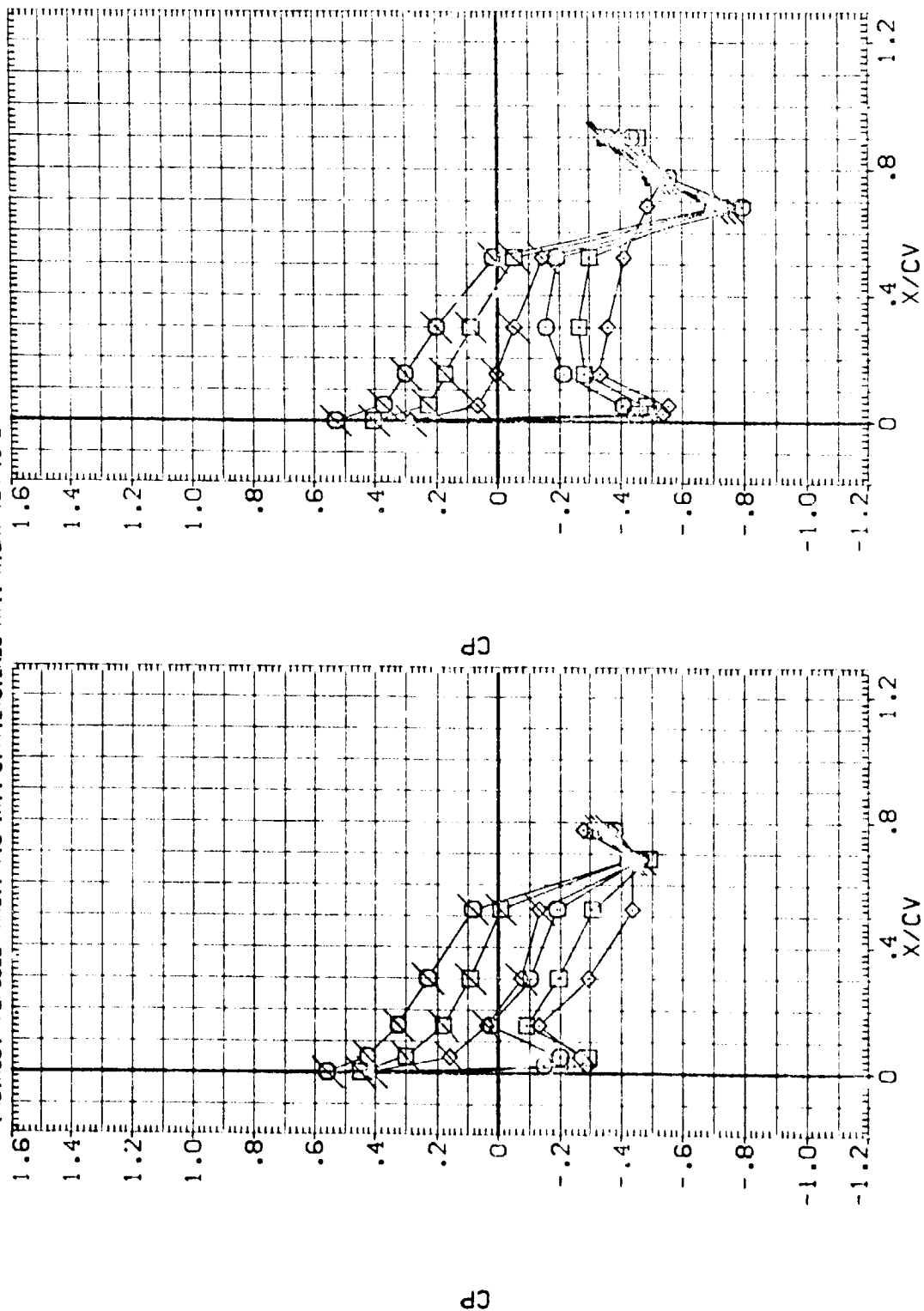
43

CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
MACH 1.050 ELEVON .000
RUDDER .000 SPDRK .000

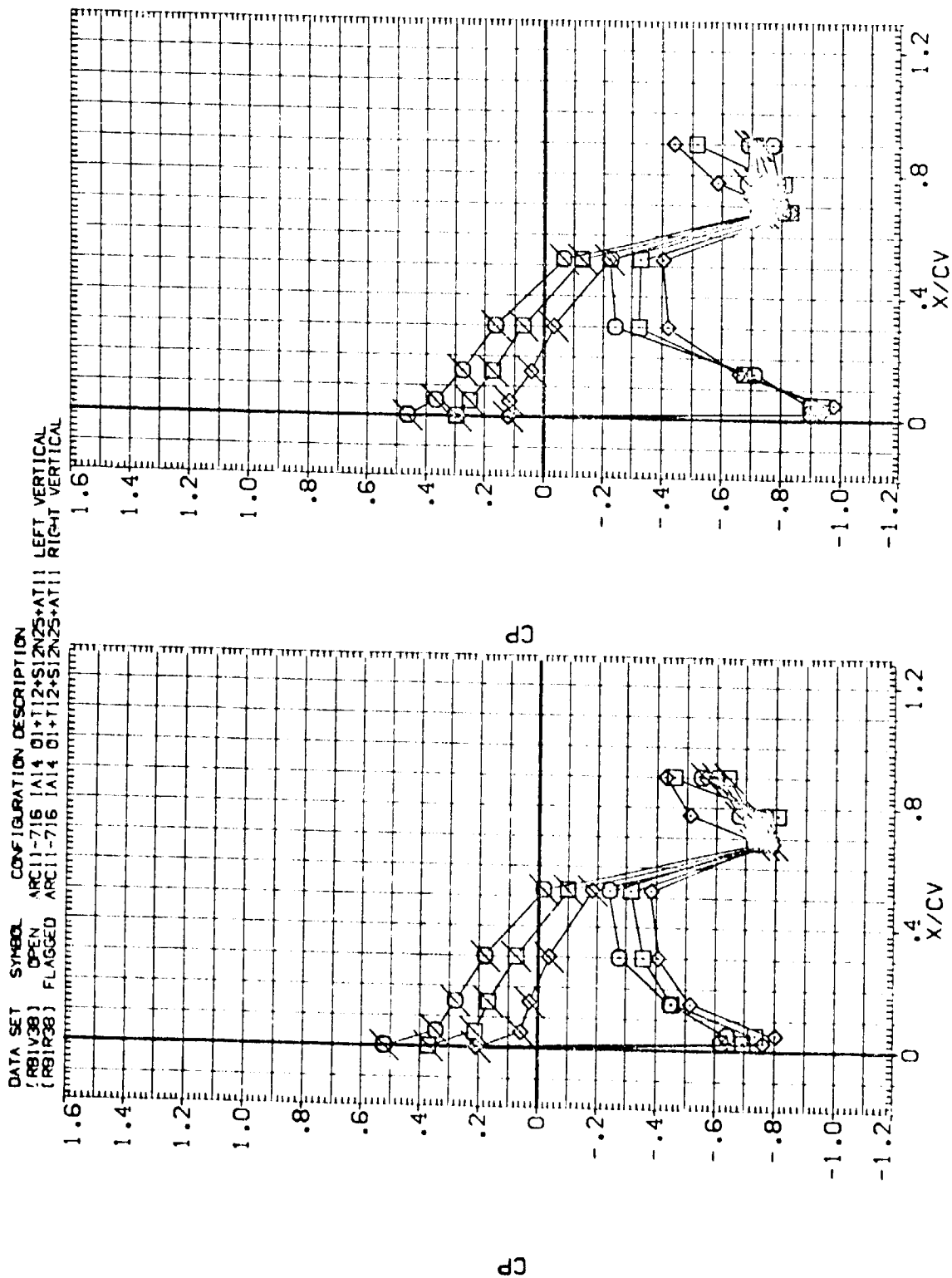
SYMBOL ALPHA0 Z/SV BETA0
O -8.060 .158 4.120
□ -3.10 .316
◇ 7.930

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(R91V38) OPEN ARC11-716 [A14 01+T12+S12N25+AT11] LEFT VERTICAL
(R81R38) FLAGGED ARC11-716 [A14 01+T12+S12N25+AT11] RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/BV	BETA	MACH	PARAMETRIC VALUES
○	-8.080	.600	1.120	RUDDER	1.050 ELEVON
◇	-3.310	.840			.000 SPEED
	7.930				



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 1.050 ELEVON
 .000 SPOILER
 .000

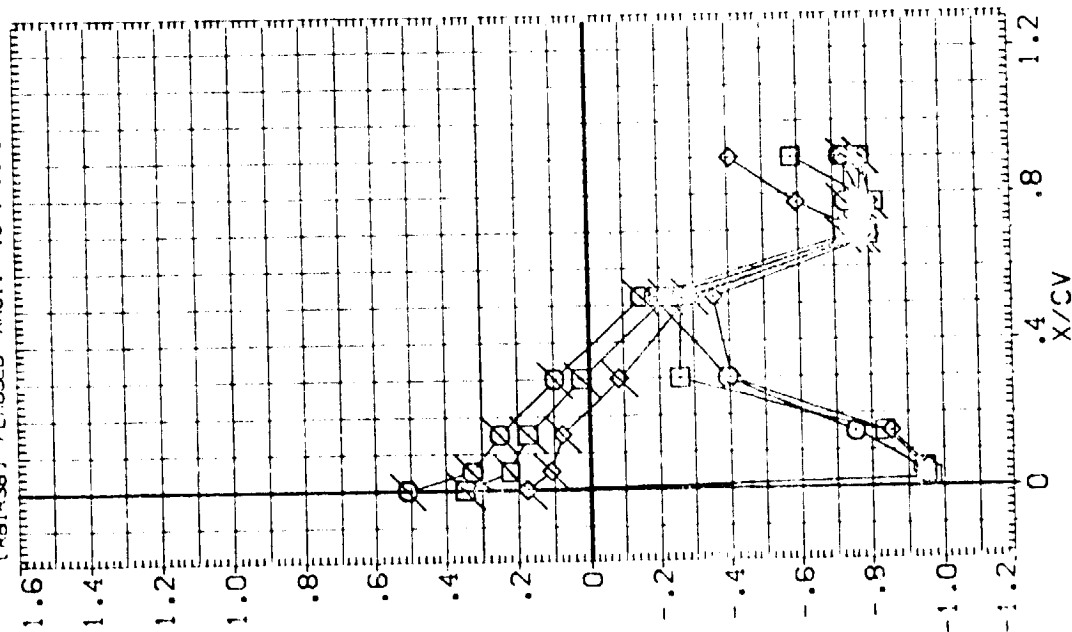
MACH
 RUDDER

BETA0
 4.120

Z/BV
 .925

SYMBOL ALPHA0
 -8.080
 -3.310
 7.930

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (081V38) OPEN ARC11-716 1A14 01+112+S12N25+AT11 LEFT VERTICAL
 (281R38) FLAGGED ARC11-716 1A14 01+112+S12N25+AT11 RIGHT VERTICAL



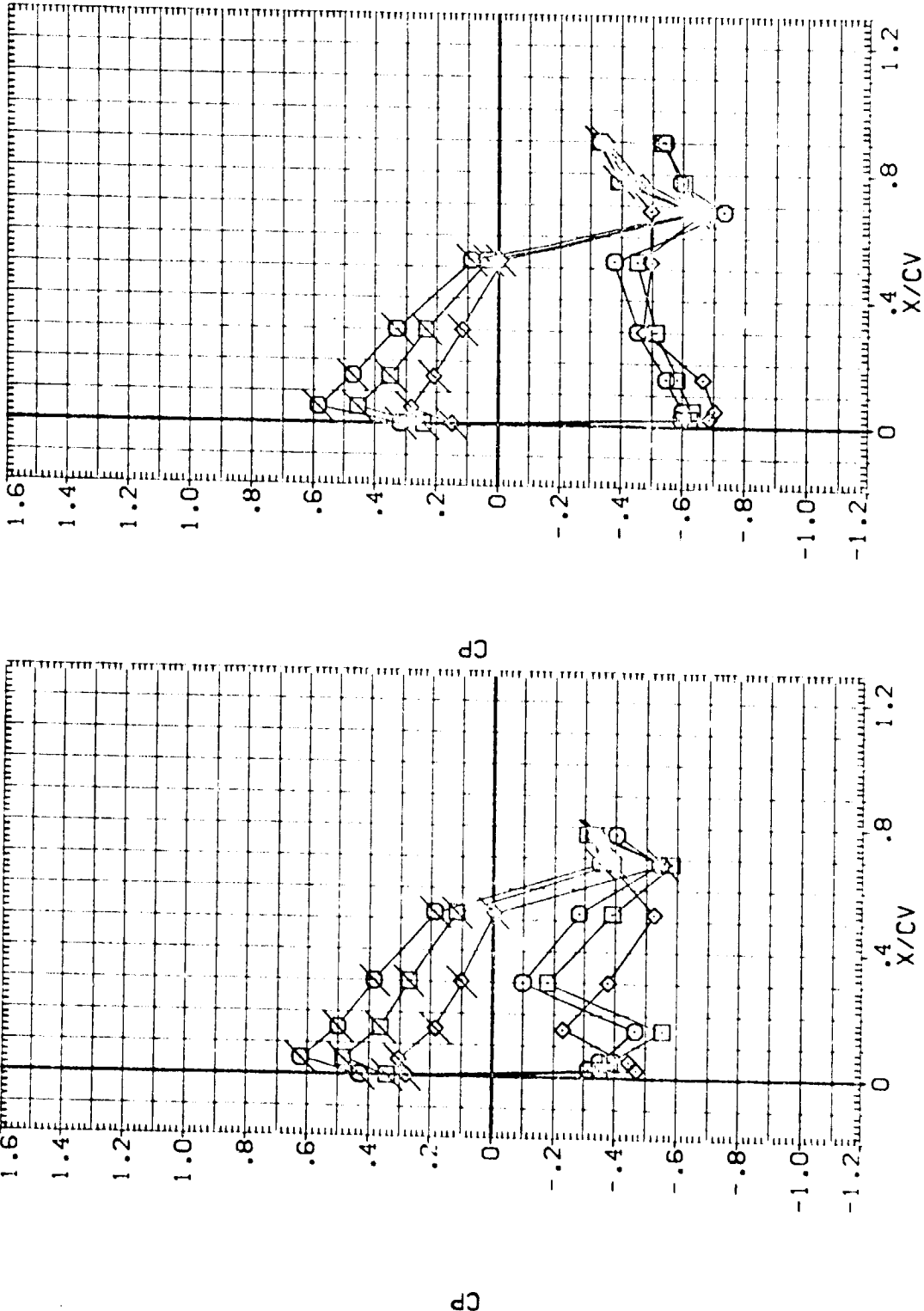
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES
 PAGE 424



PARAMETRIC VALUES
 MACH 1.050 ELEVON .000
 FLUTTER .000 SPOBRK .000

SYMBOL ALPHA Z/BV BETA
 -8.080 .158 8.160
 -3.10 .316
 7.930

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V38) OPEN ARC11-716 [A14 0]T12+S12N25+AT11 LEFT VERTICAL
 (RB1R38) FLAGGED ARC11-716 [A14 0]T12+S12N25+AT11 RIGHT VERTICAL



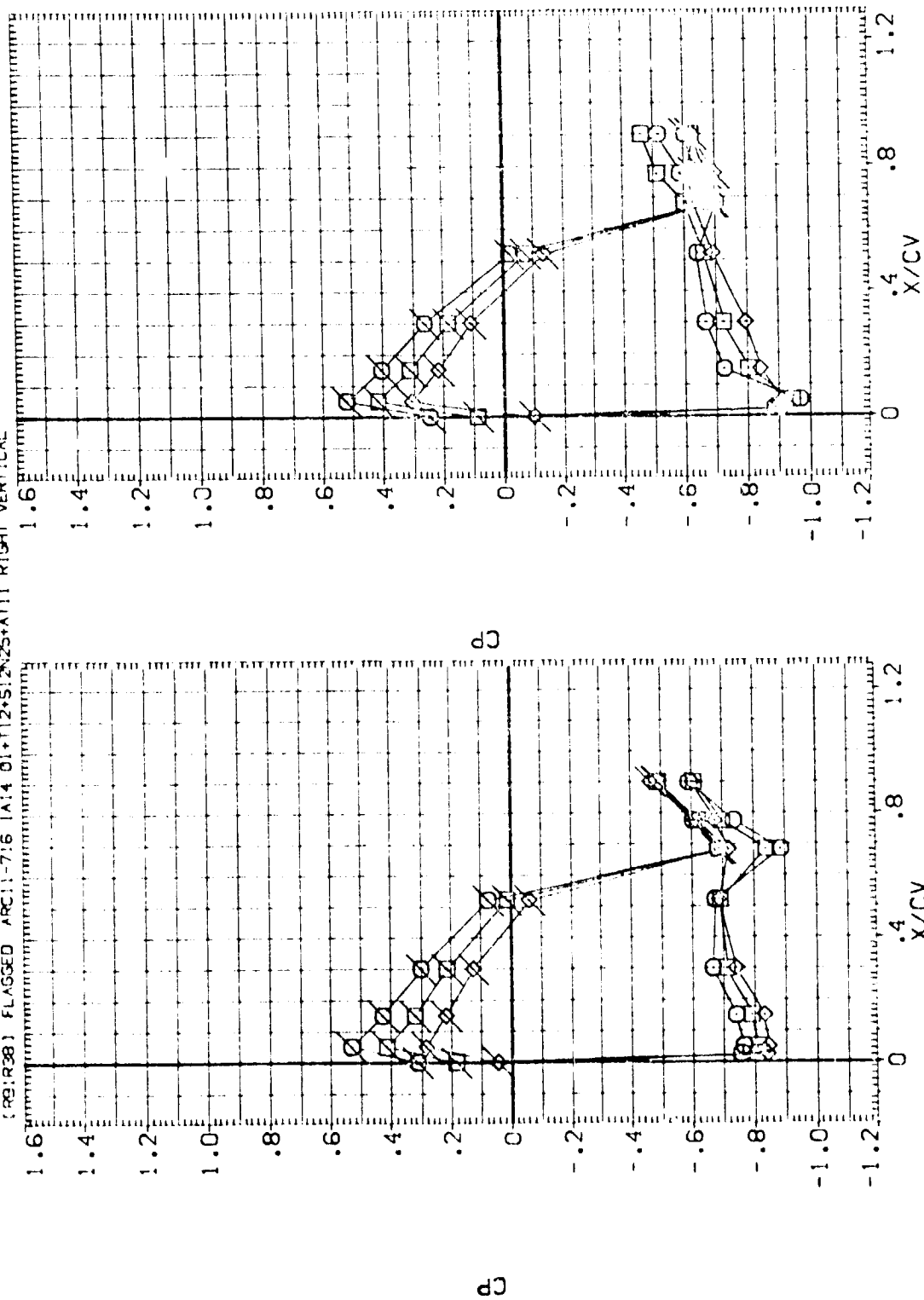
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
MACH 1.050 ELEVON .000
RUDDER .000

ALPHA 8.080
BETAD 8.160
Z/BV .600
.840

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(DBIV38) OPEN ARC11-716 [A14 01+T12+S12N25+AT11] LEFT VERTICAL
(RSIR38) FLASSED ARC11-716 [A14 01+T12+S12N25+AT11] RIGHT VERTICAL

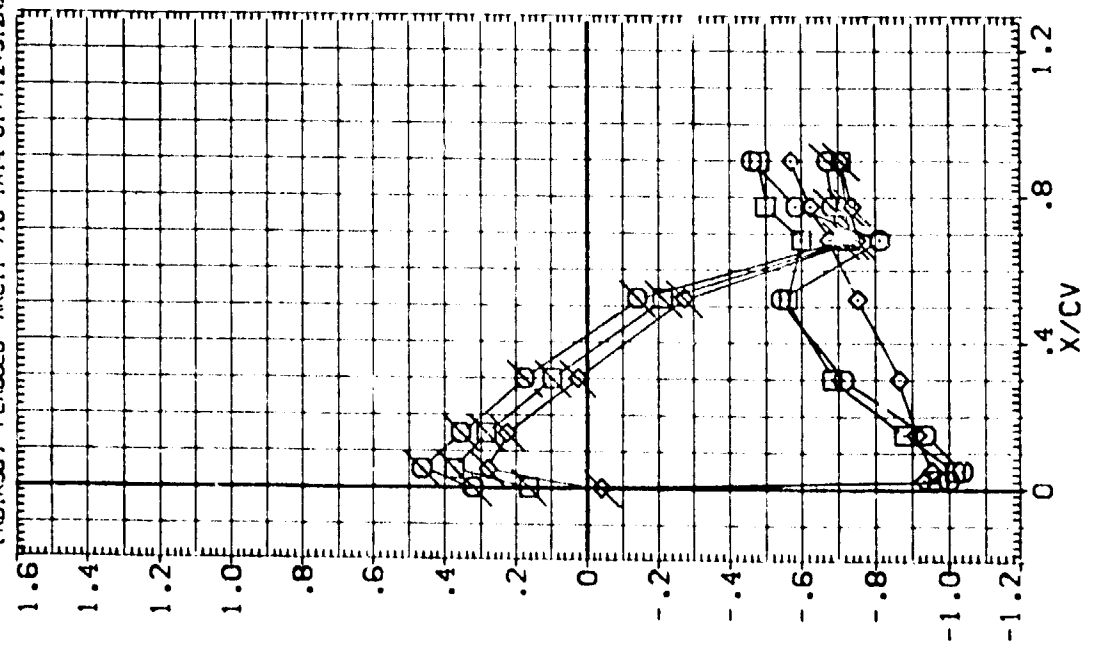


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
MACH 1.050
RUDDER .000
ELEVON .000
SPDRK .000

SYMBOL ALPHA Z/BV BETA
○ -8.080 .925 8.180
□ -3.310
◇ 7.930

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RB1V38) OPEN ARC11-716 1A14 01+T112+S12N25+AT11 LEFT VERTICAL
(RB1R38) FLAGGED ARC11-716 1A14 01+T112+S12N25+AT11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL

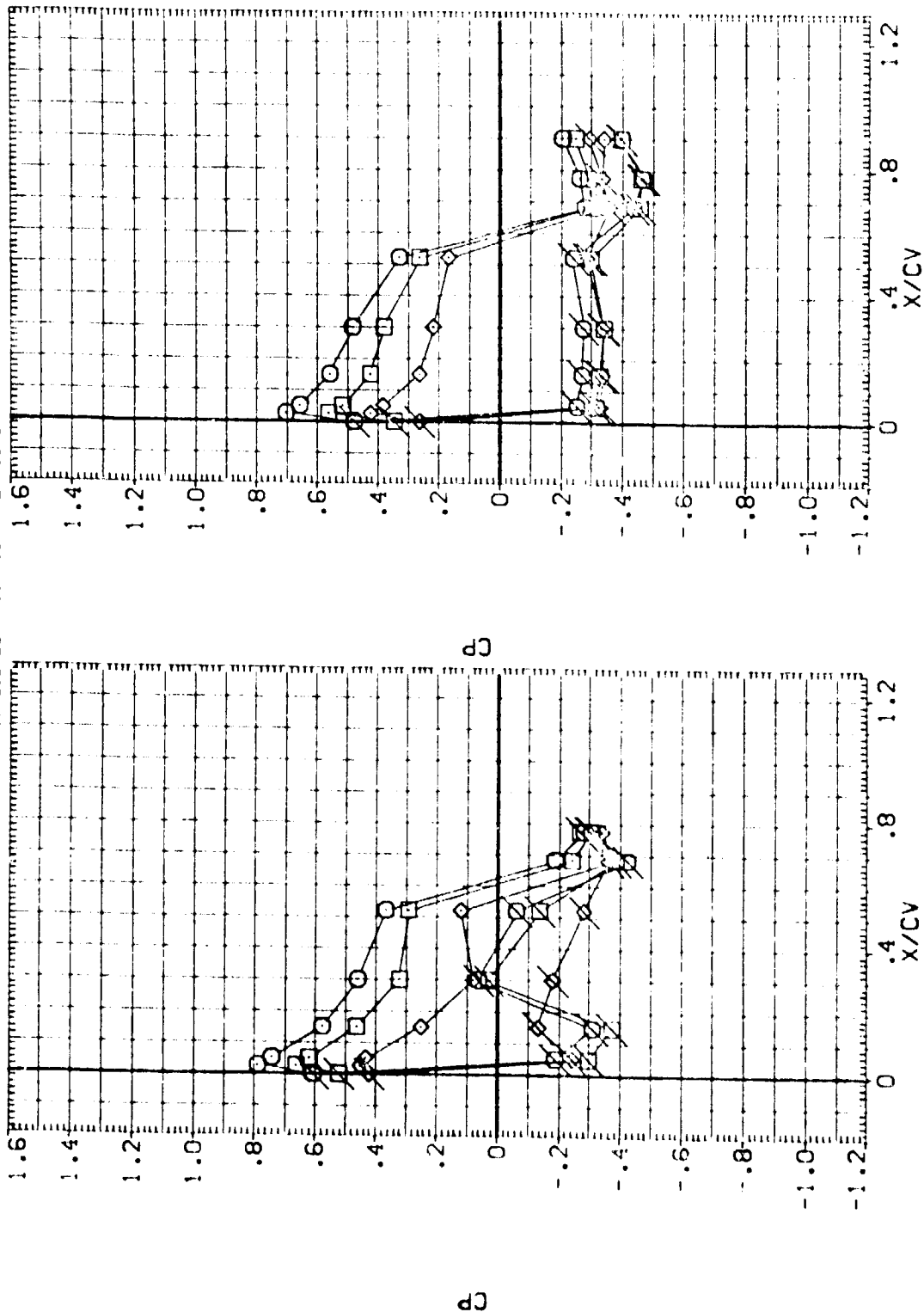
ALPHA 0
-7.920
-3.370
8.000

Z/BV
.156
.316

BETA 0
-8.040

MACH
RUDDER
1.400
.000
ELEVON
SPOILER
.000
.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
[R9]V40) OPEN ARC 11-716 [A]4 01-12-5 [2N25+AT]1 LEFT VERTICAL
[R9]R40) FLAGGED ARC 11-716 [A]4 01-12-5 [2N25+AT]1 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

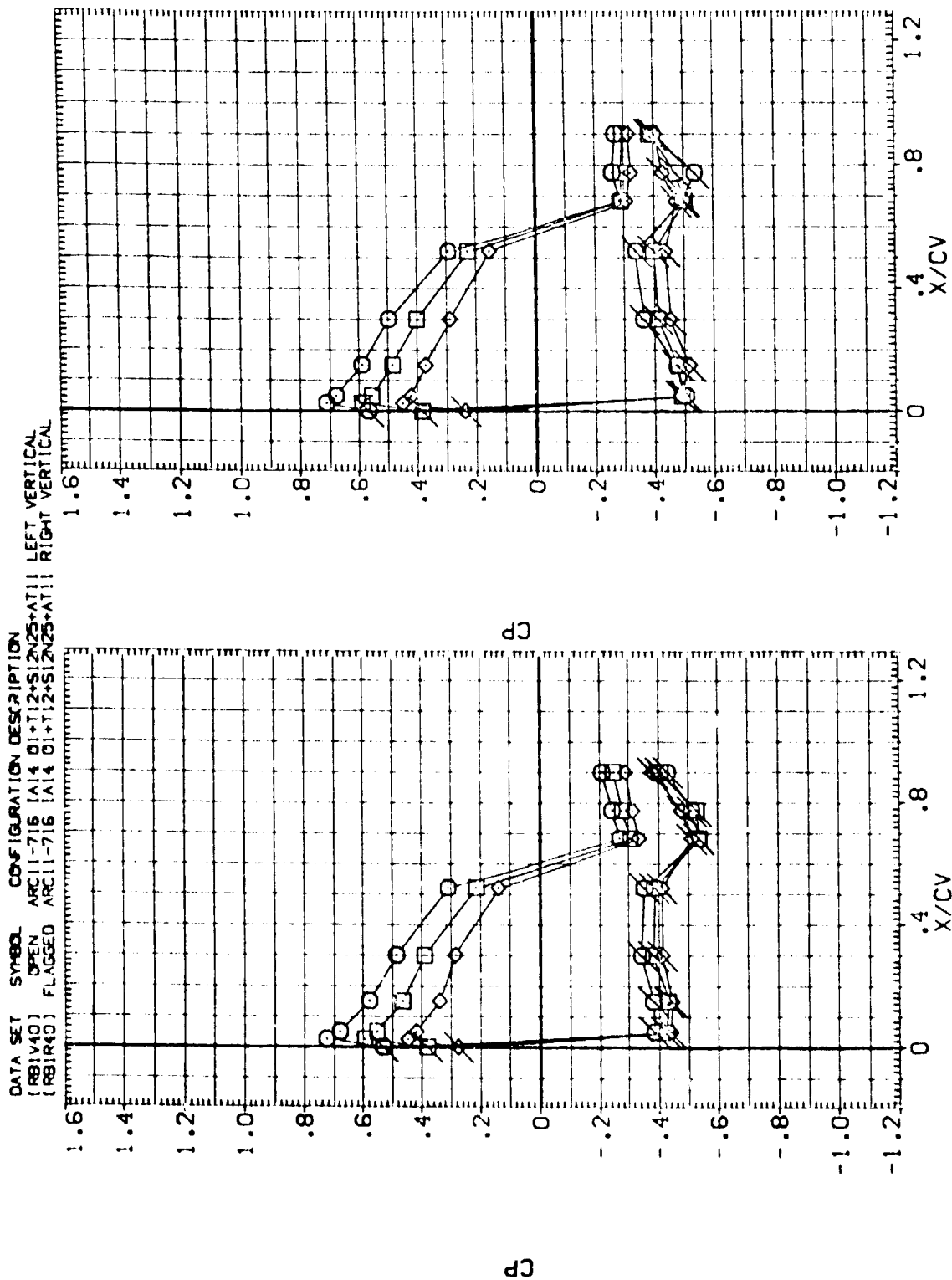
SYMBOL

ALPHA
-7.920
-3.370
8.000

Z/BV
.600
.840

BETA
-8.040

PARAMETRIC VALUES
MACH 1.400
ELEVON .000
SPDBRK .000

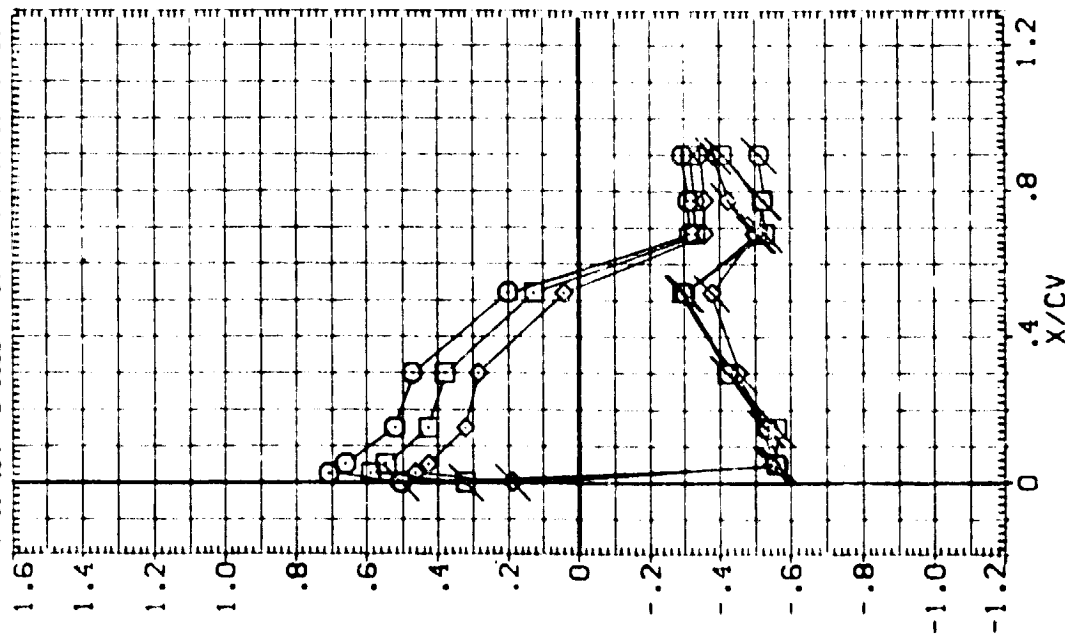


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
MACH 1.400 ELEVON .000
RUDDER .000 SPEEDRY .000

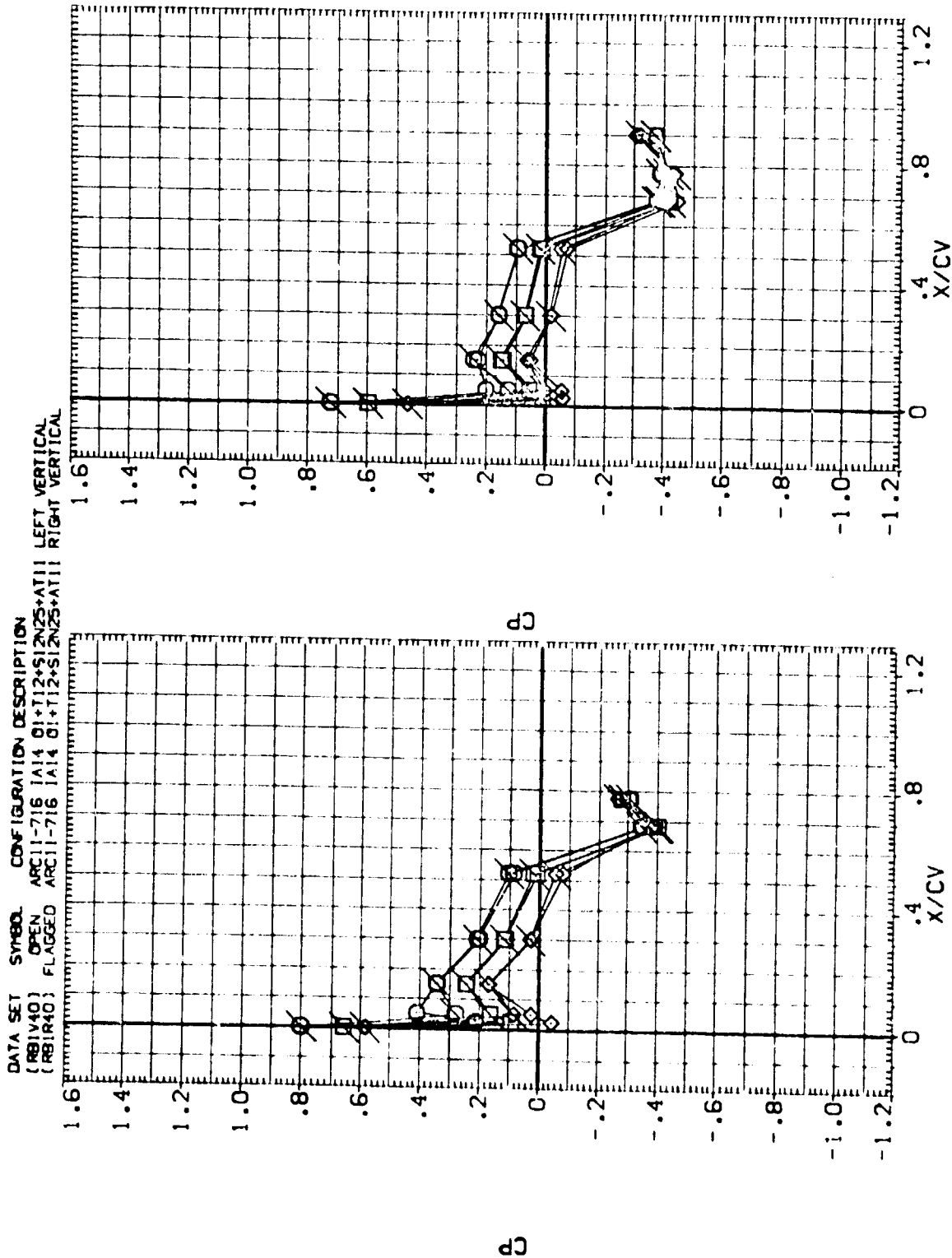
SYMBOL ALPHA0 Z/BV BETA0
-7.920 .925 -8.040
-3.370
8.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RB1V40) OPEN ARC11-716 [A14 01+112S12N2S+AT1] LEFT VERTICAL
(RB1R40) FLAGGED ARC11-716 [A14 01+112S12N2S+AT1] RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/BV	SETAD	MACH	PARAMETRIC VALUES
○	-7.920	.158	.030	RUDDER	1.400
□	-7.370	.316			ELEVON .000
◇	8.000				SPOILER .000

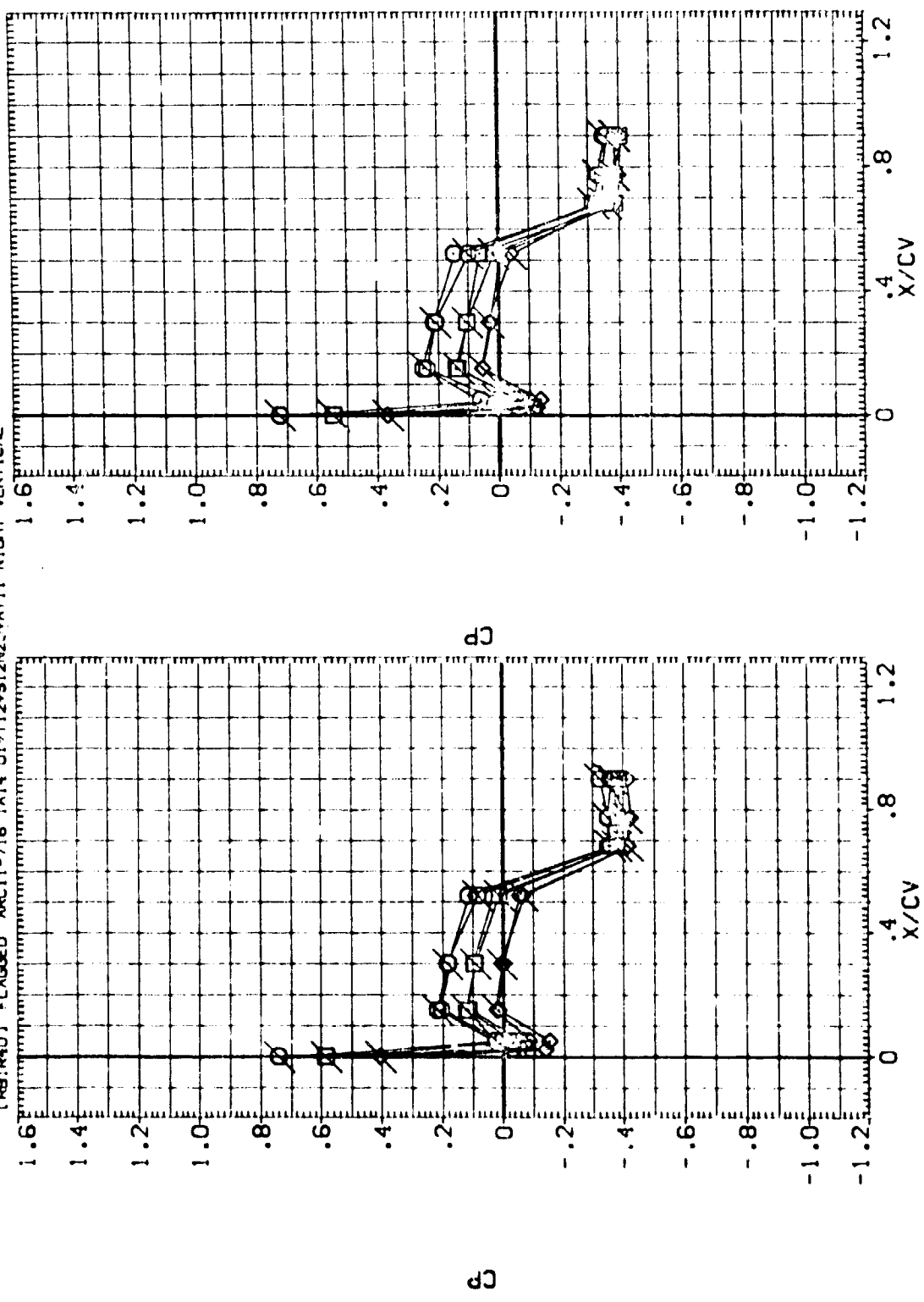


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH 1.400
 RUDDER .000
 ELEVON .000
 SPOBRK .000

ALPHA0 -7.920
 Z/BV .600
 BETA0 .030
 - .370
 8.000

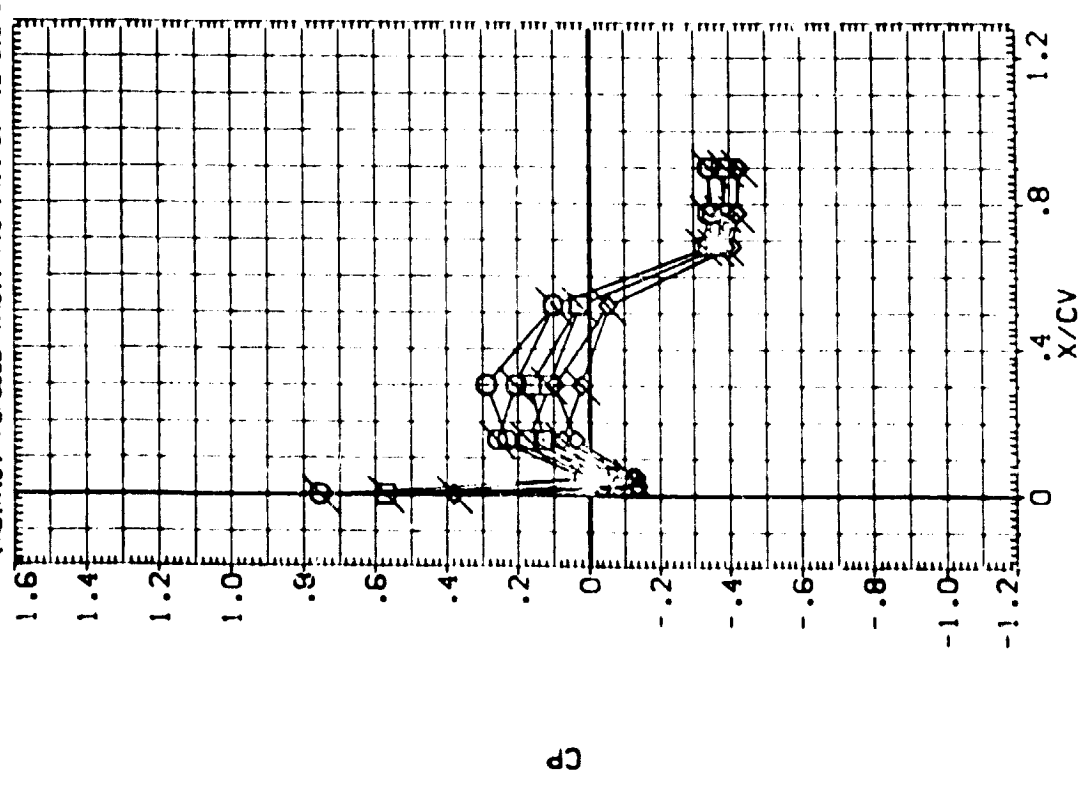
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V40) OPEN ARC11-716 [A14 01+112+5] 2N25+AT11 LEFT VERTICAL
 (RB1R40) FLAGGED ARC11-716 [A14 01+112+5] 2N25+AT11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/BV	BETA	PARAMETRIC VALUES
○	-7.920	.925	.030	MACH
□	-1.370			1.400
◇	0.000			ELEVON
				.000
				SPDRK
				.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (R8|V40) OPEN ARC|-7|6 |A|4 0|+|1|2|5|2|N|5|+A|1| LEFT VERTICAL
 (R8|R40) FLAGGED ARC|-7|6 |A|4 0|+|1|2|5|2|N|5|+A|1| RIGHT VERTICAL

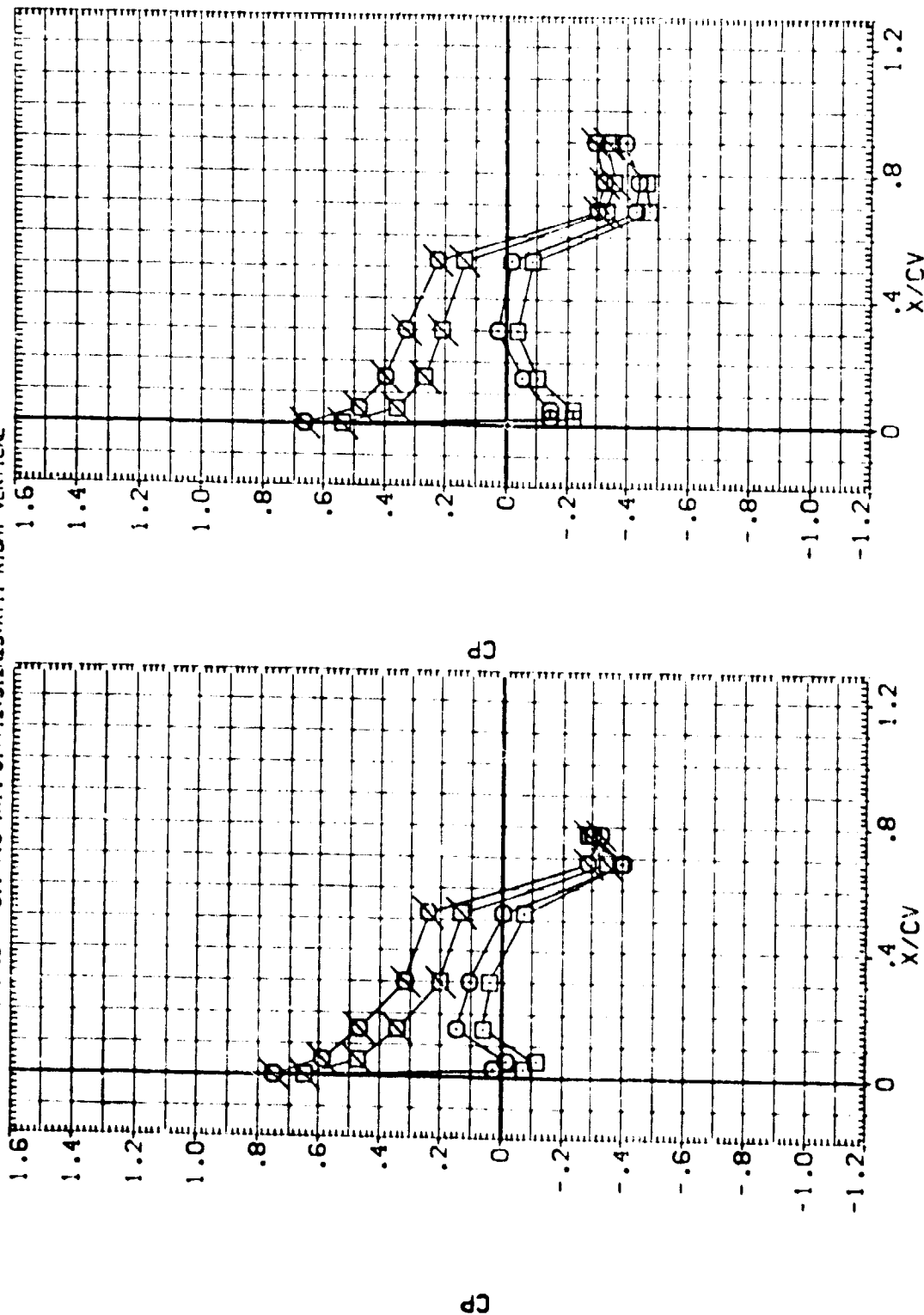


SYMBOL
□

ALPHA-0 -7.920
Z/BV .158
BETA-0 4.100
-370 .316

PARAMETRIC VALUES
MACH 1.400
RUDDER .000
ELEVON .000
SPDBRK .000

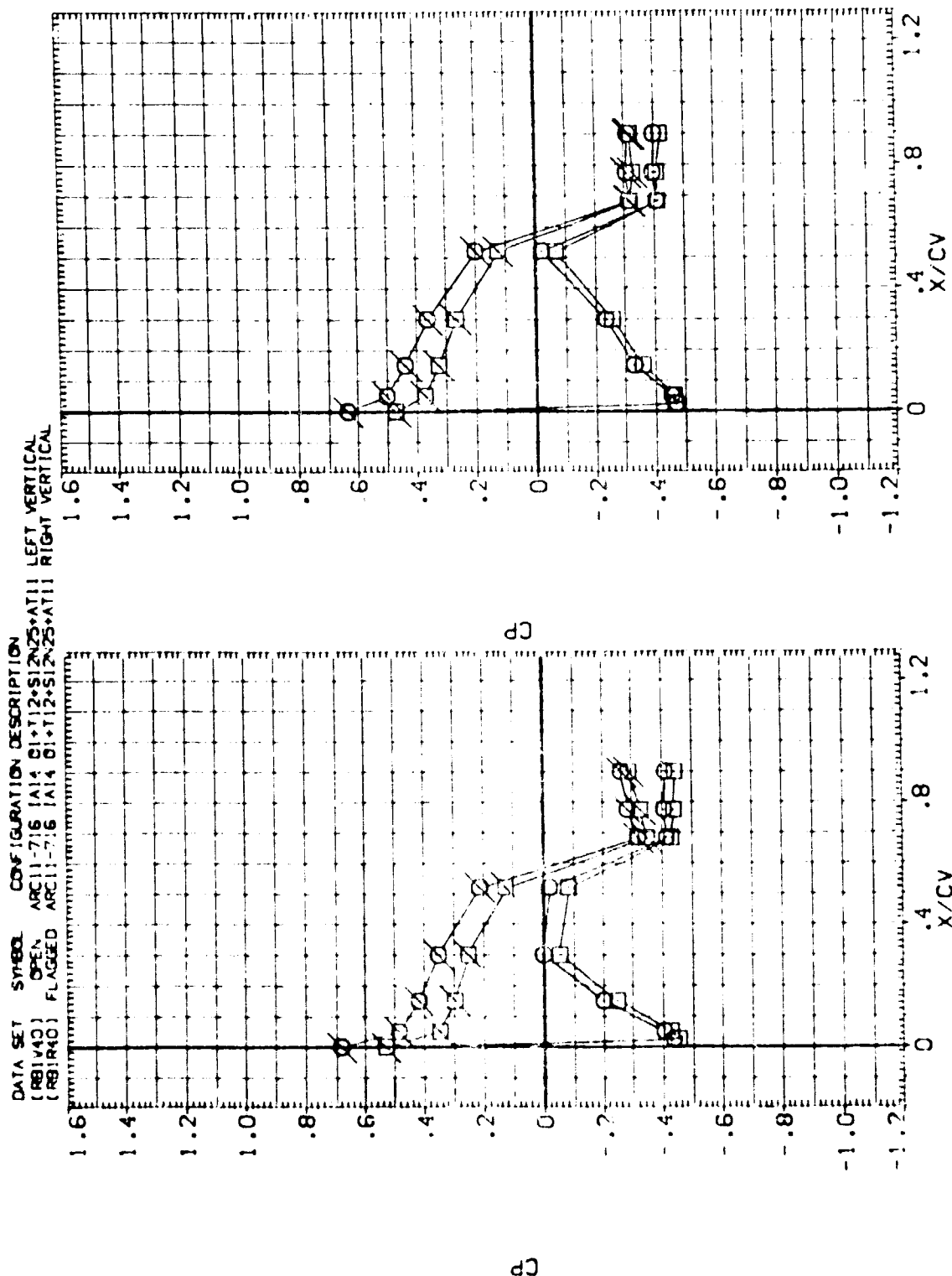
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(RB:V40) OPEN ARC [-716 [A14 0]112-S12N3+AT11 LEFT VERTICAL
(RB:V40) FLAGED ARC [-716 [A14 0]112-S12N3+AT11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH 1.400 ELEVON .000
 RUDDER .000

SYMBOL ALPHA0 Z/BV BETA0
 -7.920 .600 4.100
 -.370 .840

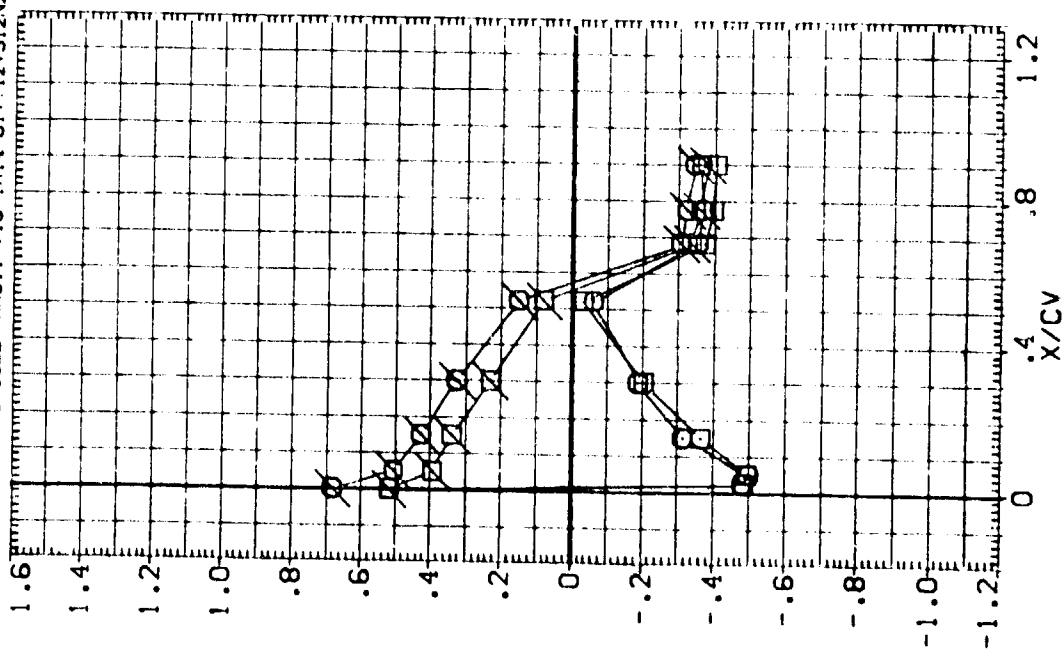


CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA0 Z/BV BETA0
 -7.920 .925 4.100
 -1.370

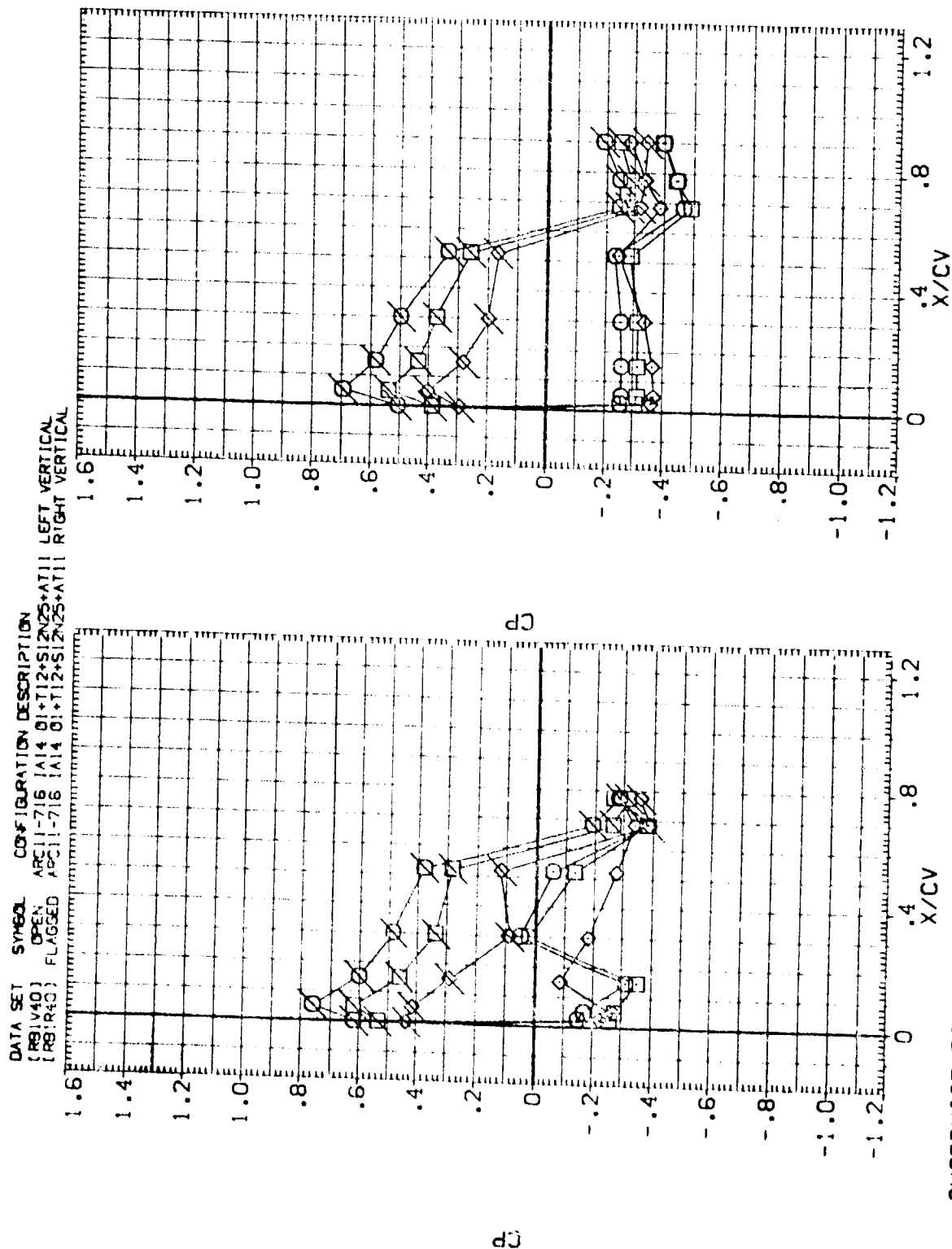
PARAMETRIC VALUES
 MACH 1.400 ELEVON .000
 RUDDER .000 SPOILER .000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB1V40) OPEN ARC11-716 1A14 01+T12+S12N25+AT11 LEFT VERTICAL
 (RB1R40) FLAGGED ARC11-716 1A14 01+T12+S12N25+AT11 RIGHT VERTICAL



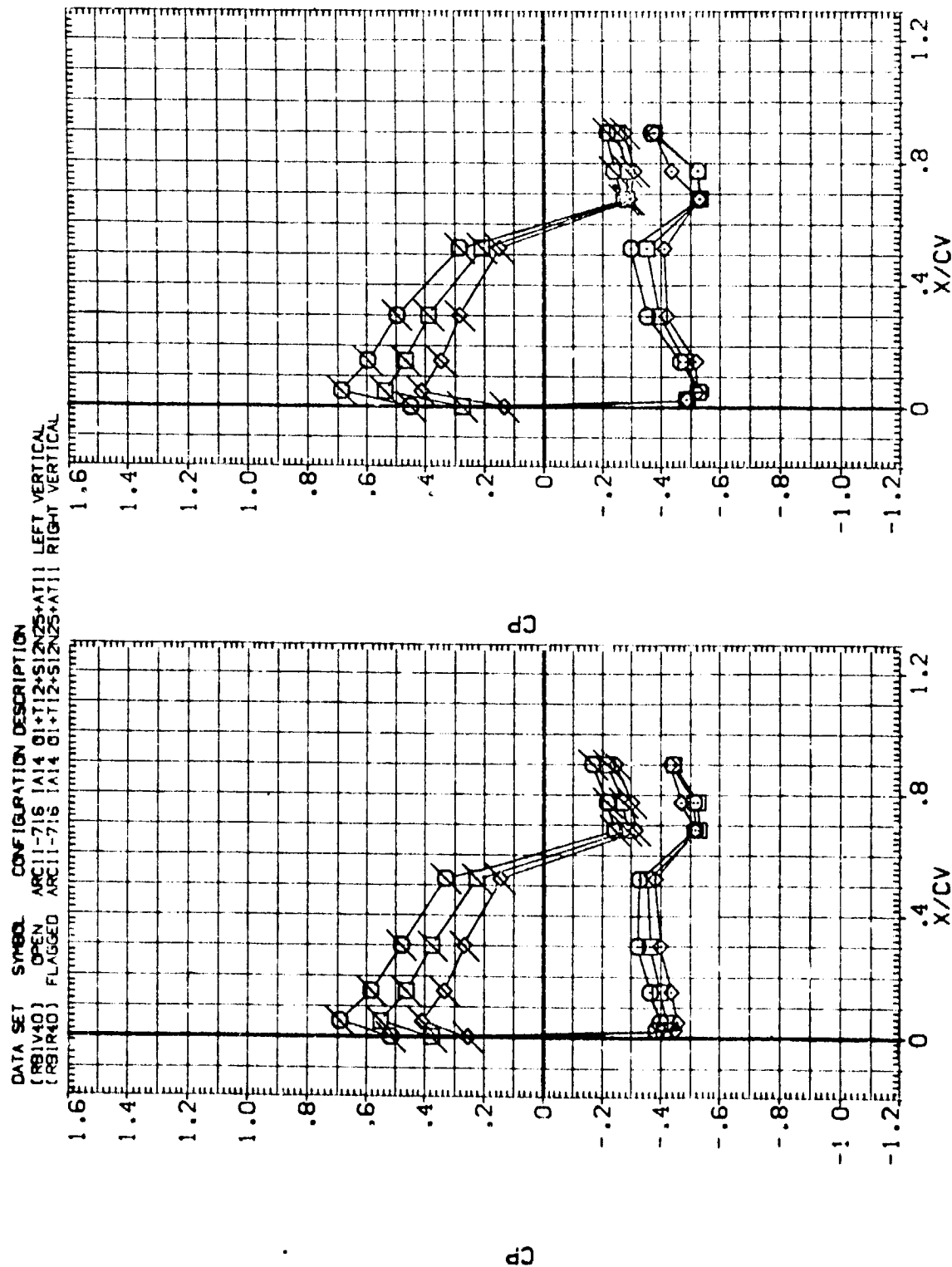
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL	ALPHA	Z/BV	BETA	MACH	PARAMETRIC VALUES
○	-7.920	.158	8.190	RUDDER	1.400 ELEVON .000
□	-3.370	.316			1.000 SPUBRK .000
◇	8.000				



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

SYMBOL ALPHA Z/BV BETA MACH PARAMETRIC VALUES
 -7.920 .600 8.190 RUDDER 1.400 ELEVON .000
 -.370 .840 .000 SPOILER
 8.000



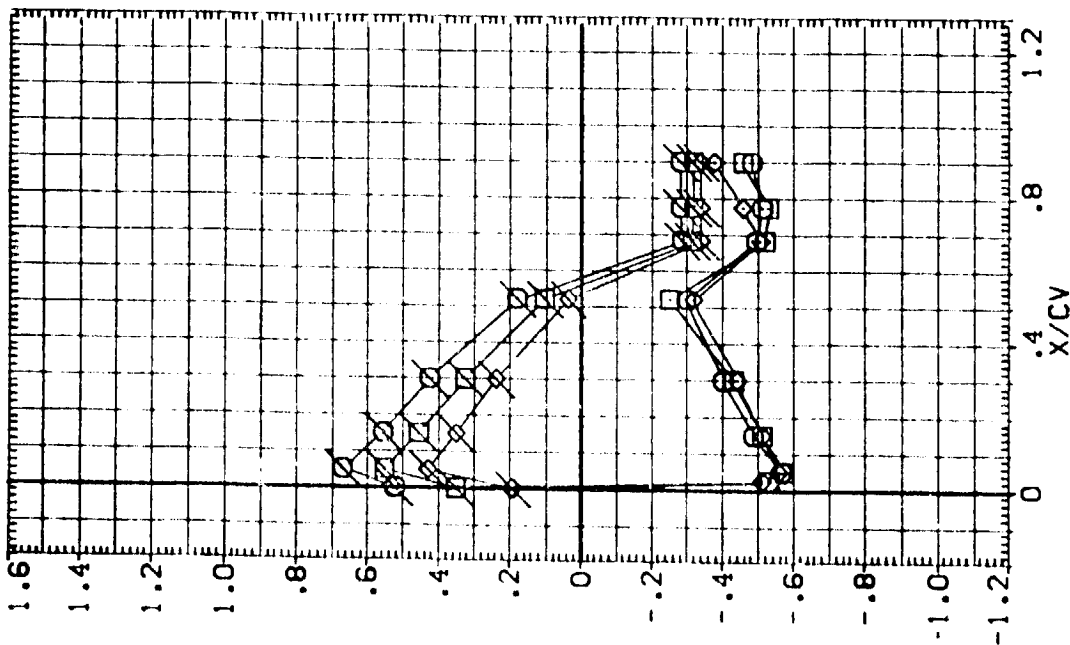
CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

PARAMETRIC VALUES
 MACH 1.400 ELEVON .000
 RUDDER .000 SPOBRK .000

ALPHA 0
 BETA 0

SYMBOL ALPHA 0 Z/BV .925 BETA 0
 -7.820
 -3.370
 9.000

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (RB) (V40) OPEN ARC 11-716 (A) 4 0 112+SI2N25+AT 11 LEFT VERTICAL
 (RB) (V40) FLAGGED ARC 11-716 (A) 4 0 112+SI2N25+AT 11 RIGHT VERTICAL



CHORDWISE DISTRIBUTION OF LEFT AND RIGHT SURFACE VERTICAL TAIL PRESSURES

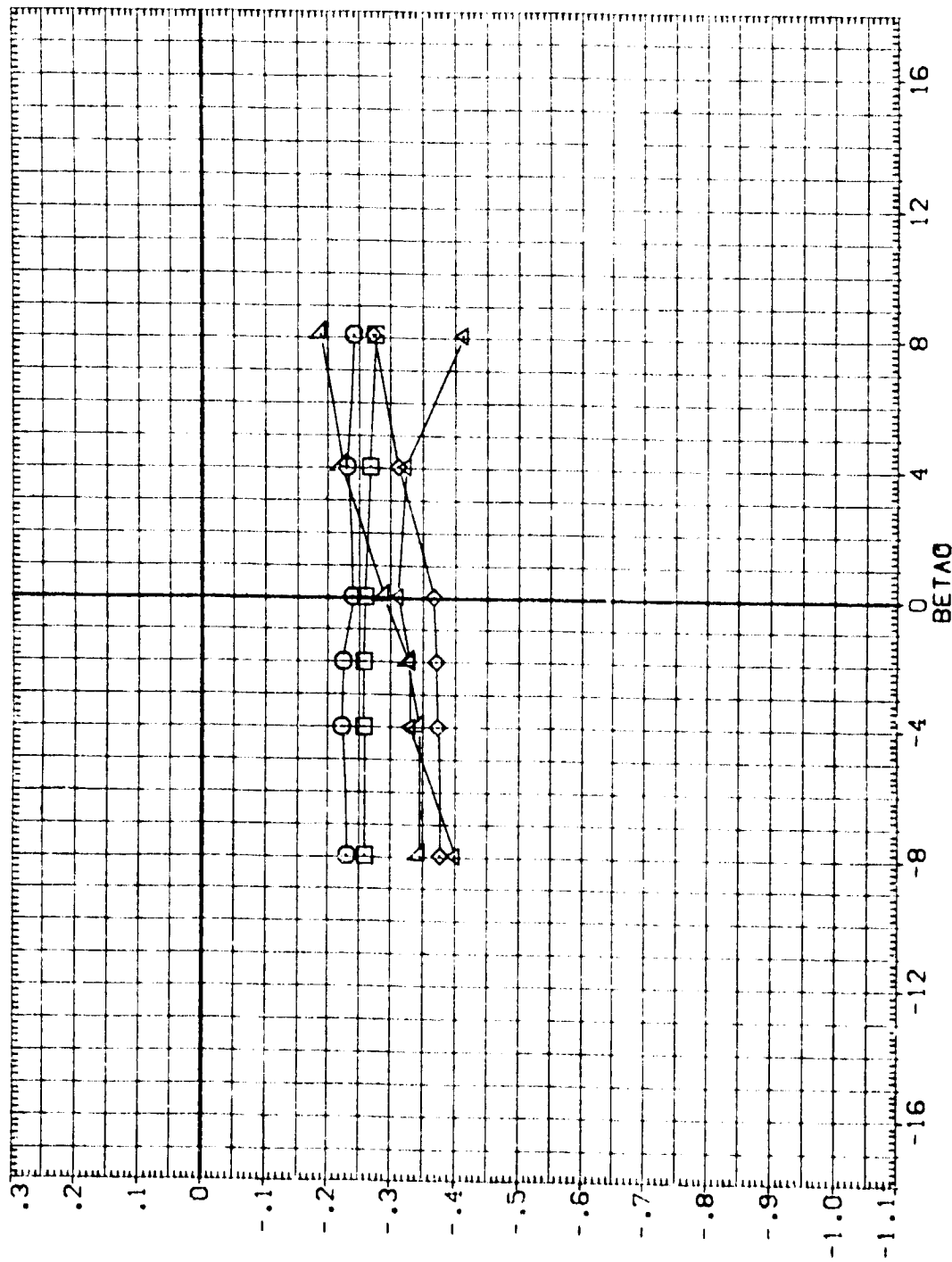
ARC11-716 IA14 01+T12+S12N25+AT10 FUS+RUDFL BASE (RB1C33)

SYMBOL
 ○ □ ◇ △

TAP NO
 1.000
 2.000
 3.000
 4.000
 5.000

ALPHA
 -8.220

PARAMETRIC VALUES
 MACH 1.250
 RUDEEP .000
 ELEVON .000
 SPOBRK .000



PRESSURE COEFFICIENT, CP

ORBITER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 FUS+RUDEL BASE (RB1C33)

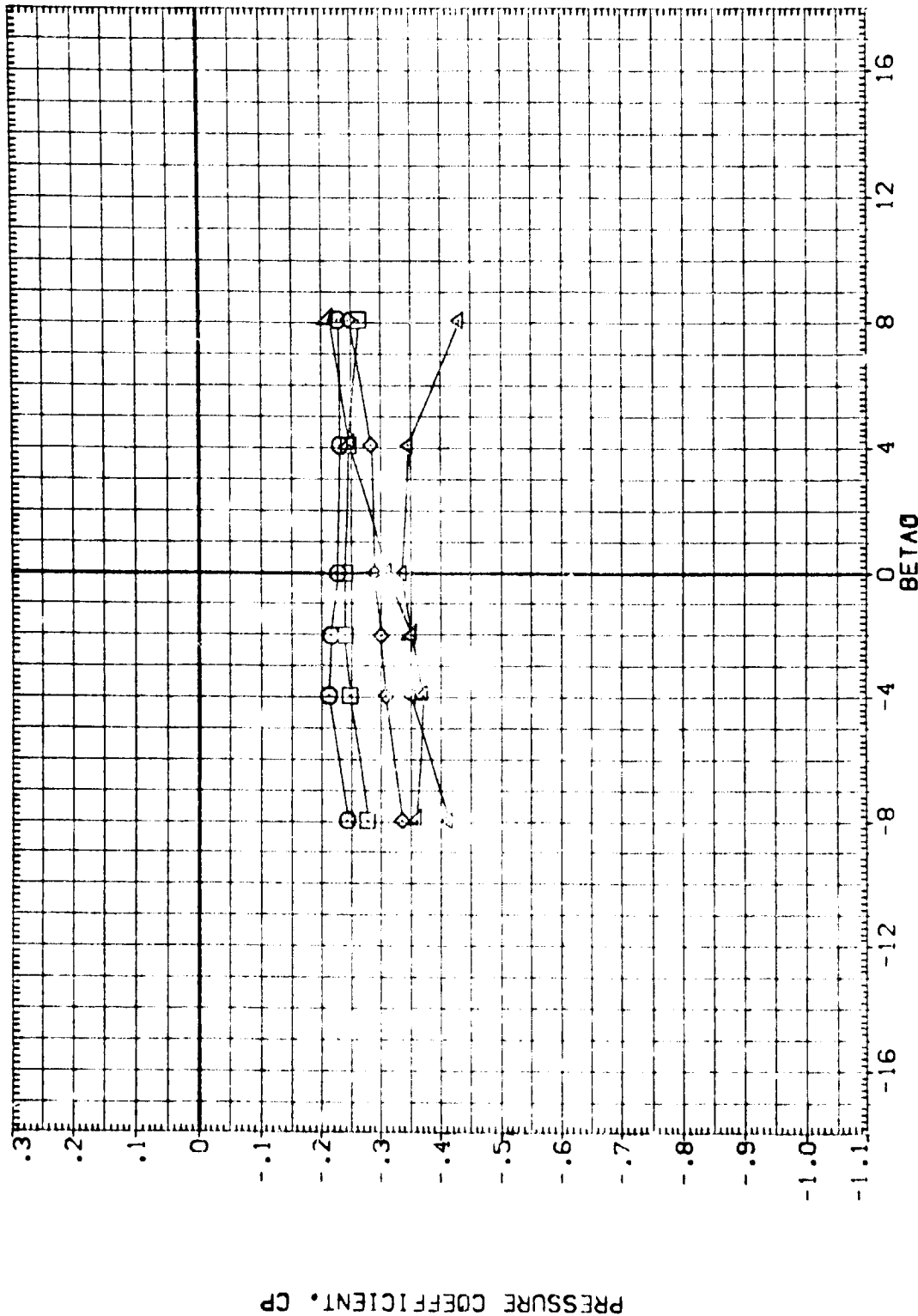
SYMBOL
 ▽ □ ◇ △

TAP NO
 1.000
 2.000
 3.000
 4.000
 5.000

ALPHA/5
 .000 -4.200

MACH
 RUDDER

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOILER .000



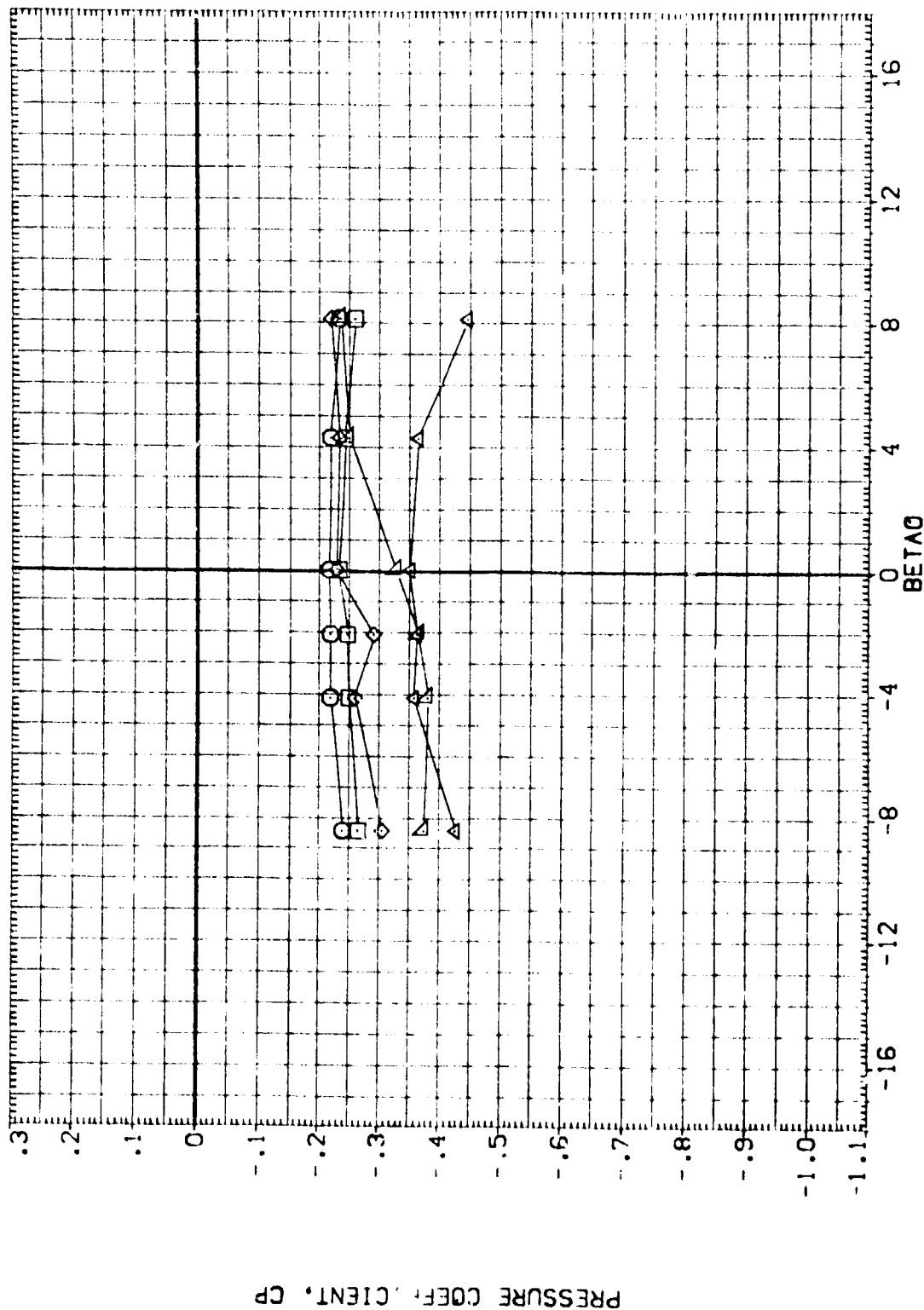
ORBITER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 FUS+RUDFL BASE (RBIC33)

SYMBOL
 1.000
 2.000
 3.000
 4.000
 5.000

TAP NO
 1.000
 2.000
 3.000
 4.000
 5.000

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000

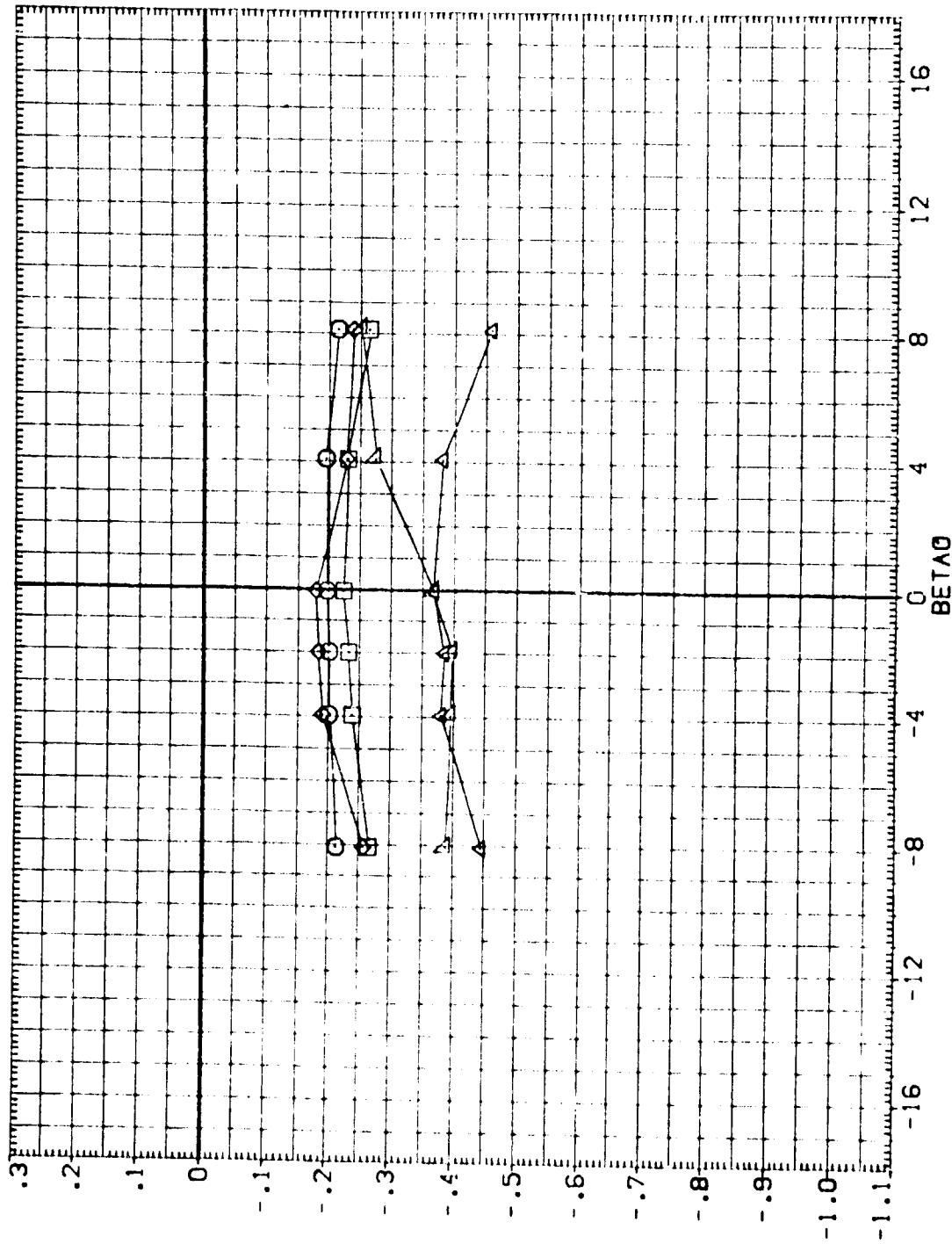


ORBITER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 FUS+RUDFL BASE (RB1C33)

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL TAP NO ALPHA0
 1.000 .000 4.300
 2.000
 3.000
 4.000
 5.000



PRESSURE COEFFICIENT, CP

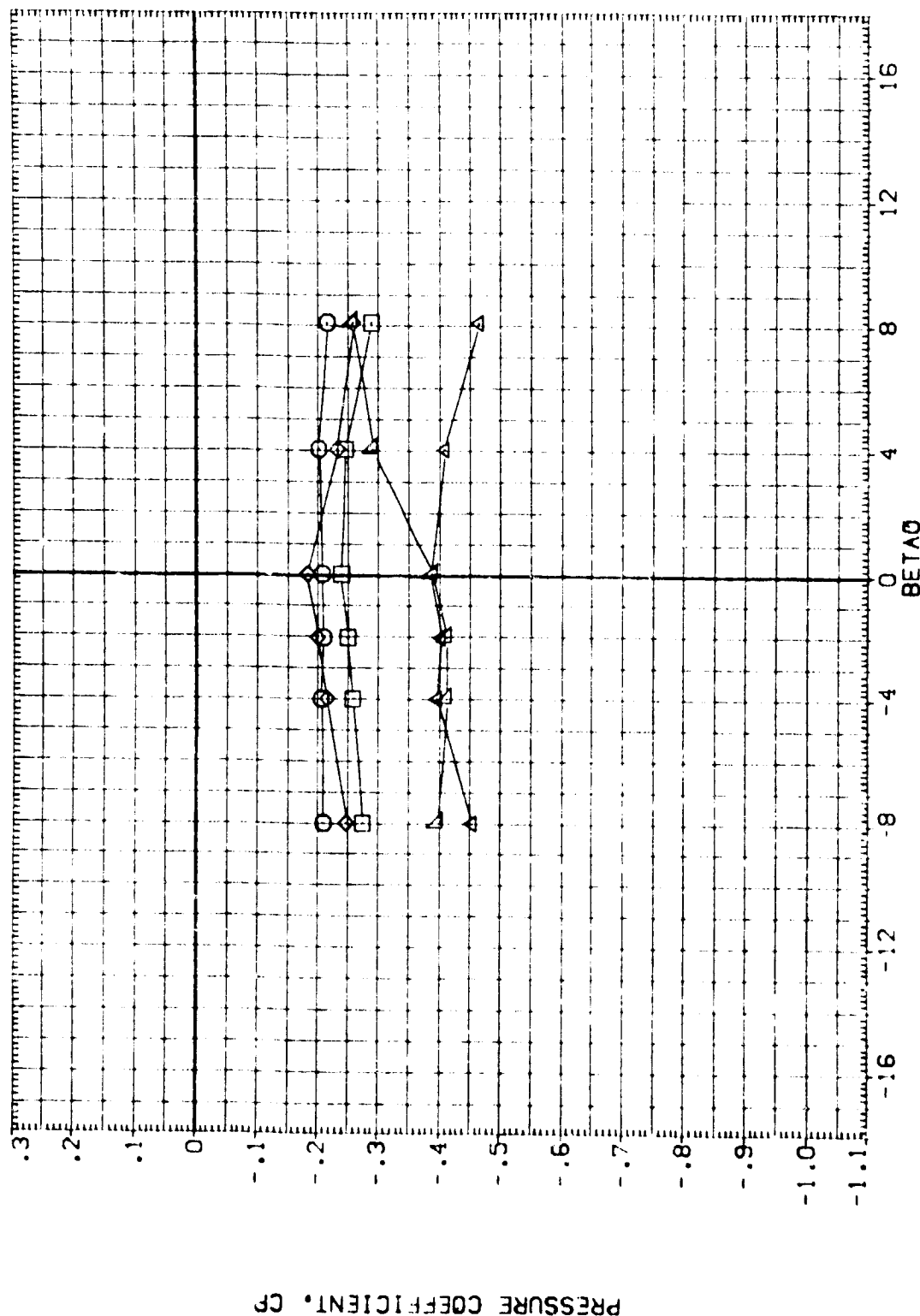
ORBITER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 FUS+RUDFL BASE (RBIC33)

SYMBOL
 ○ □ ◇ △

TAP NO
 1.000
 2.000
 3.000
 4.000
 5.000

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000



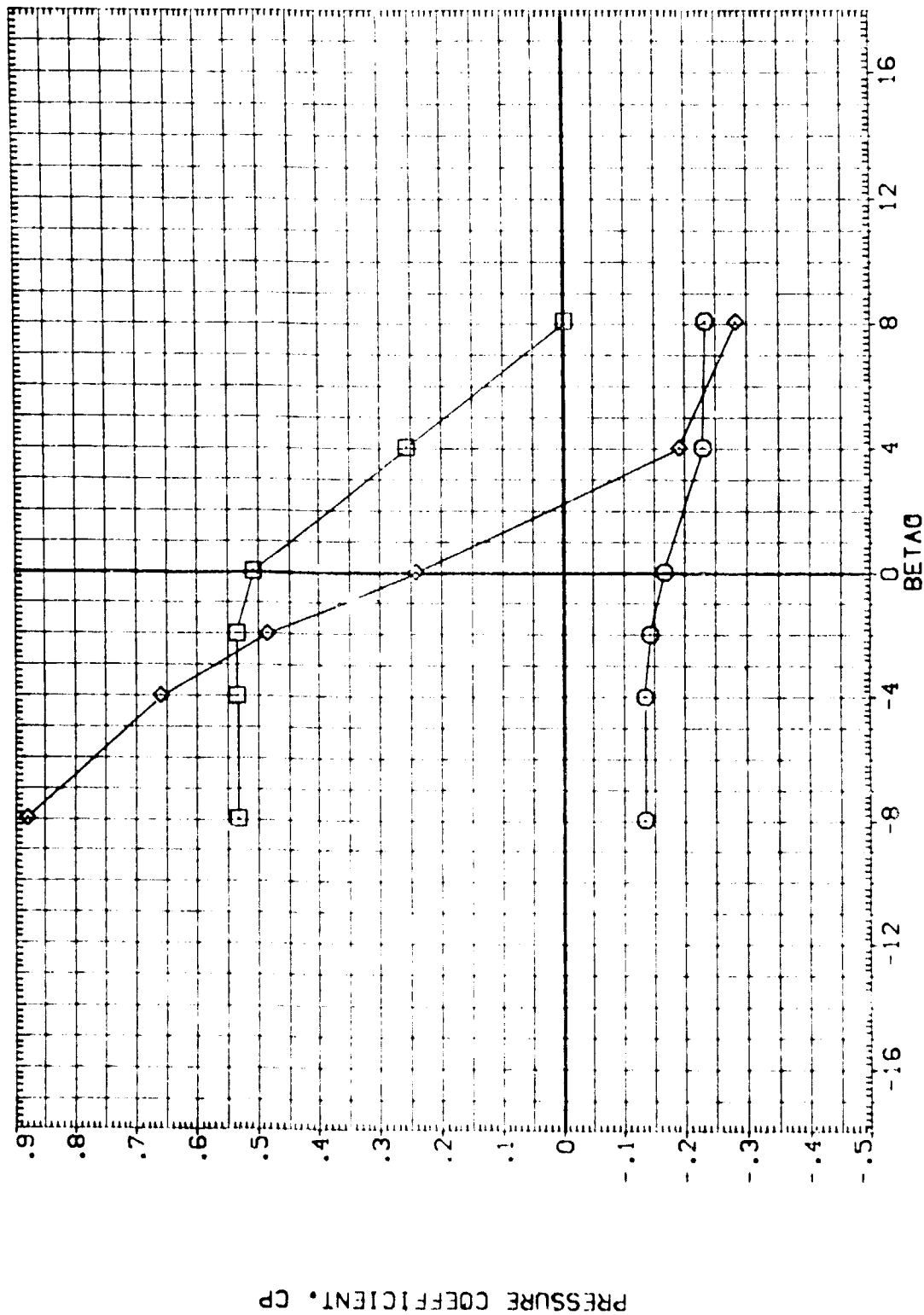
ORBITER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 OMS NOZZLE (RB1E33)

SYMBOL
 ○
 □
 ◇

PHI
 135.000
 160.000
 225.000

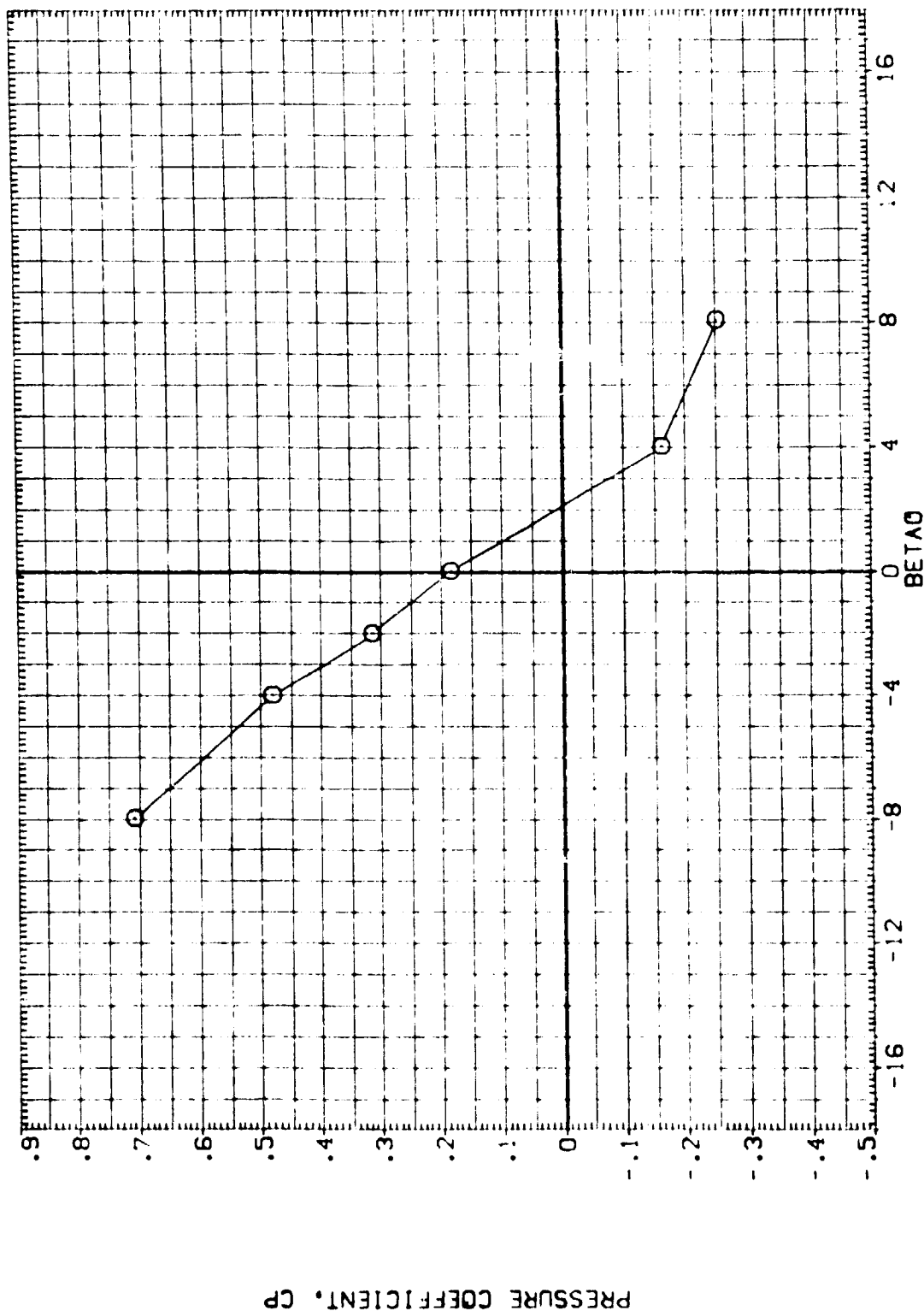
PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOBRK .000



OMS NOZZLE PRESSURES

ARC11-716 1A14 01+T12+S 2N25+AT10 OMS NOZZLE (RB1E33)

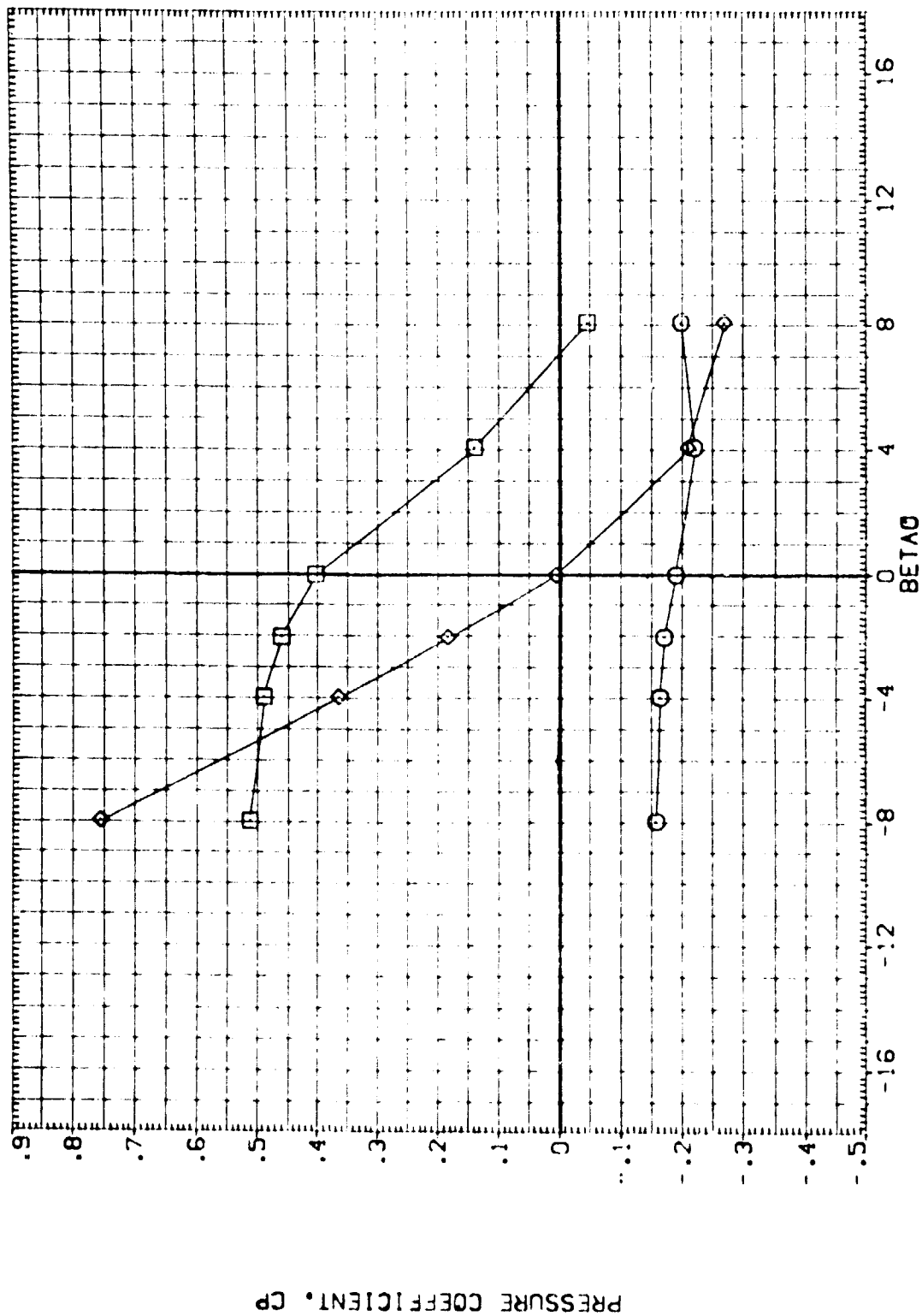
SYMBOL	PHI	X/LNM	ALPHA0	PARAMETRIC VALUES	
O	180.000	.400	-8.220	MACH	ELEVON
				RUDER	SPOBRK
					.000
					.000



OMS NOZZLE PRESSURES

ARC11-716 1A14 C1+T12+S12N25+AT10 OMS NOZZLE (RB1E33)

SYMBOL	PHI	X/LUM	ALPHA	MACH	PARAMETRIC VALUES
○	135.000	.200	-4.200	RUDDER	1.250
□	160.000				.000
◇	225.000				.000

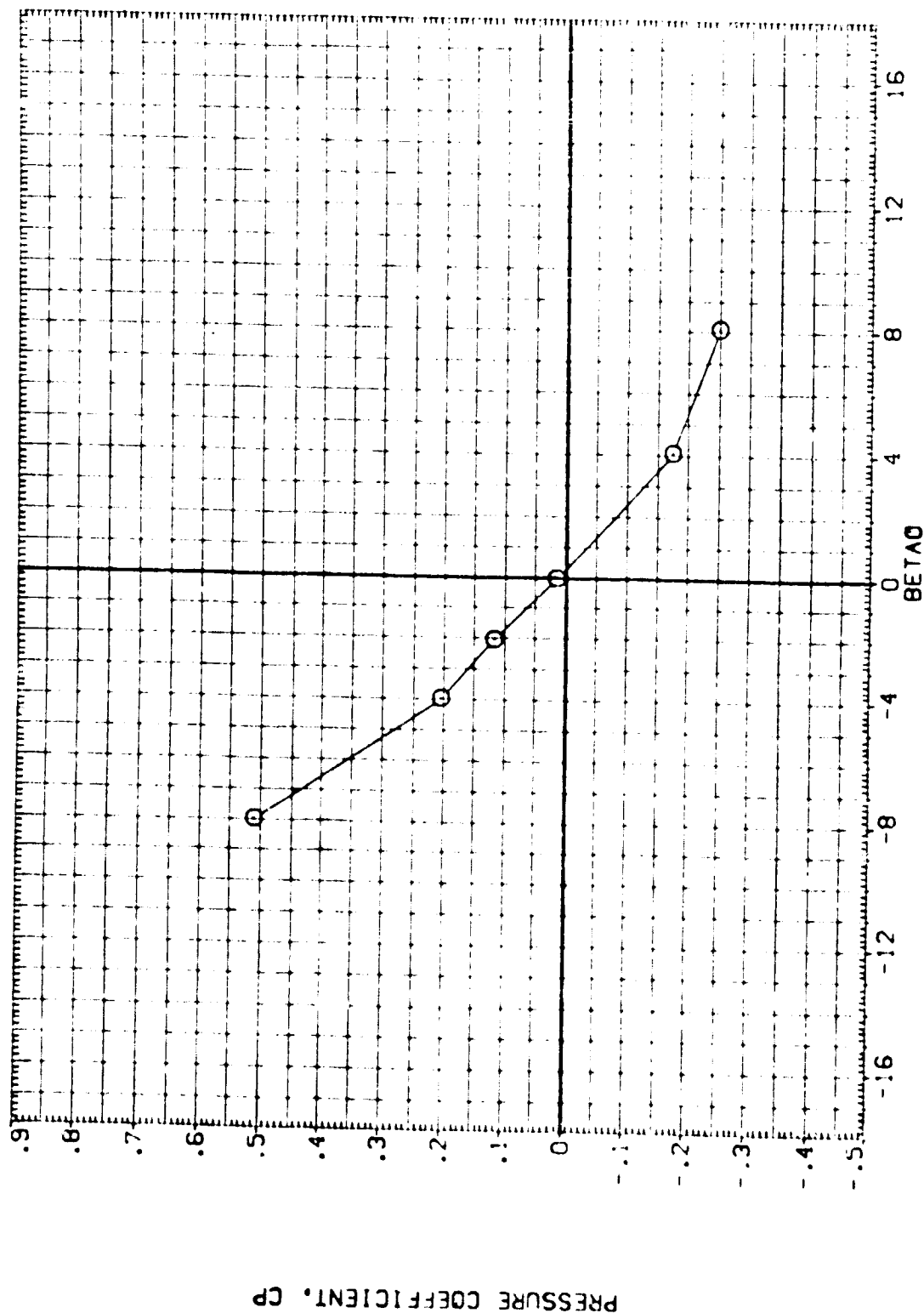


OMS NOZZLE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 OMS NOZZLE (RB1E33)

SYMBOL 0 P-1 180.000 X/LIN .400 ALPHA0 -4.200

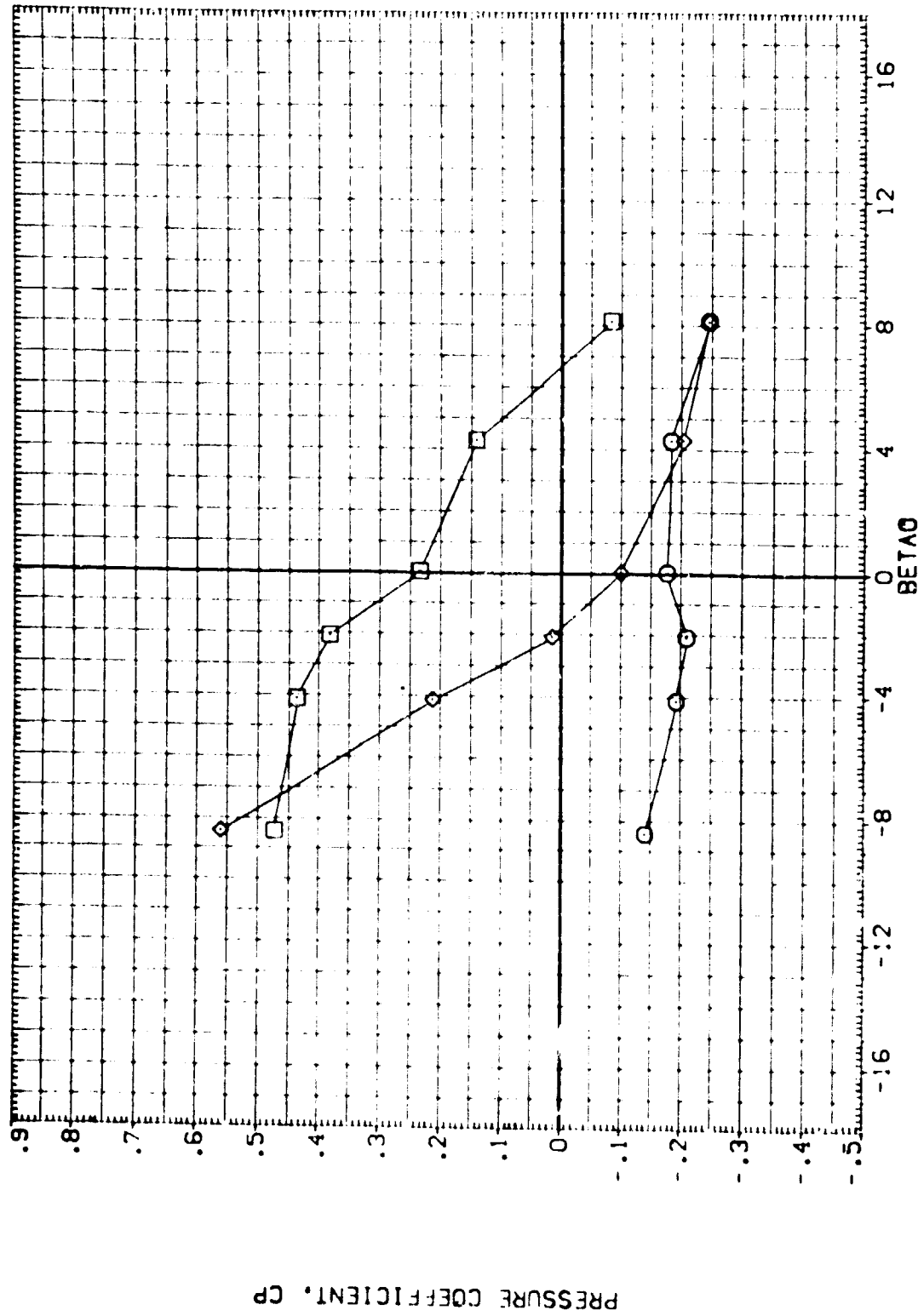
PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000



OMS NOZZLE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 OMS NOZZLE (RB1E33)

SYMBOL	PHI	X/LM	ALPHA	MACH	PARAMETRIC VALUES
◇	135.000	.200	-.760	RUDDER	1.250 ELEVON .000
□	160.000				.000 SPEEDK .000
◇	225.000				



OMS NOZZLE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 OMS NOZZLE (RB1E33)

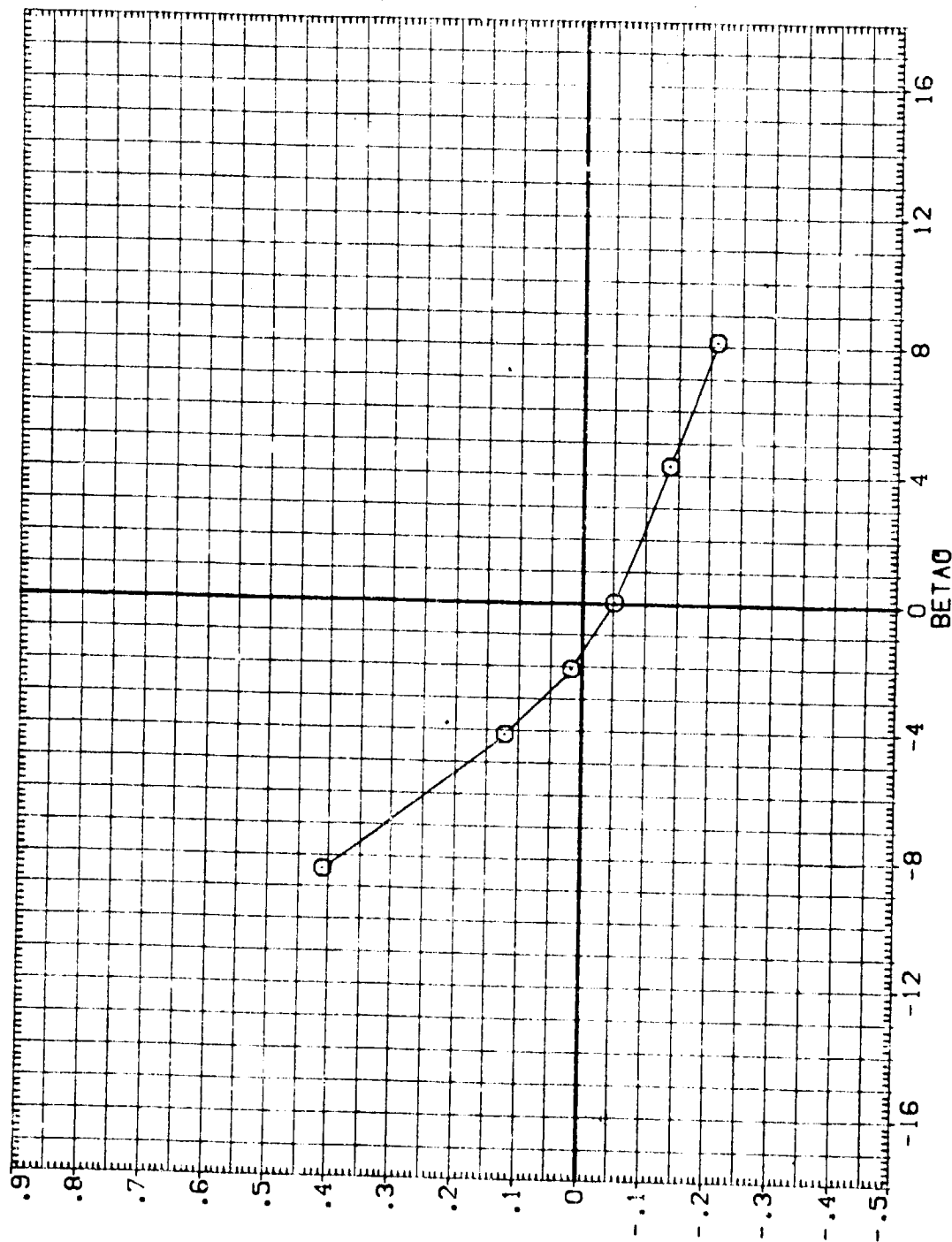
SYMBOL
O

PHI
180.000

X/LNH
.400

ALPHA0
-.750

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPEED/K .000



OMS NOZZLE PRESSURES

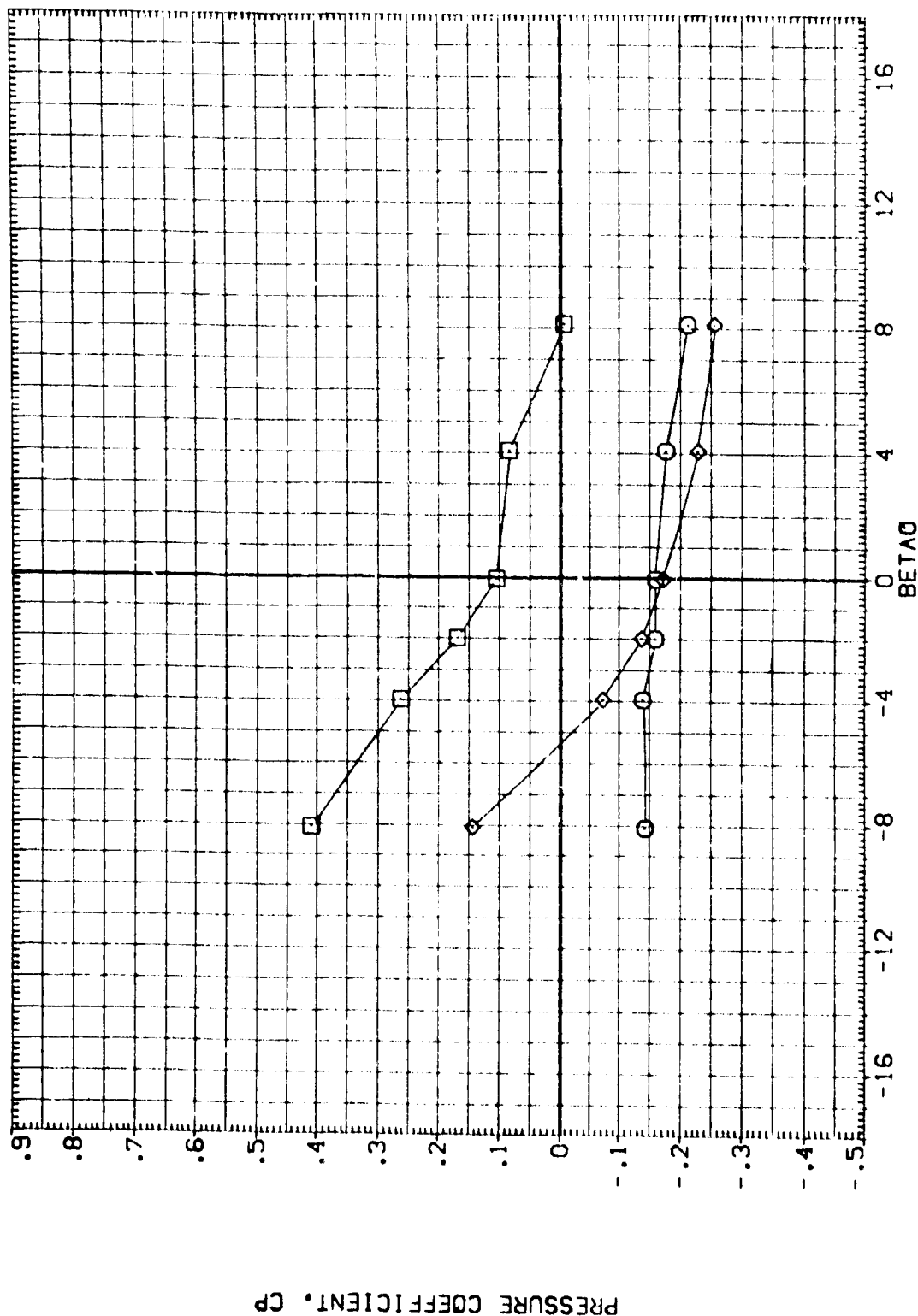
ARC11-716 1A14 01+112+S12N25+AT10 0MS NOZZLE (RB1E33)

SYMBOL

135.000
180.000
225.000

X/LNH .200
ALPHA0 4.300

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBRK
NACH
RUDDER



0MS NOZZLE PRESSURES

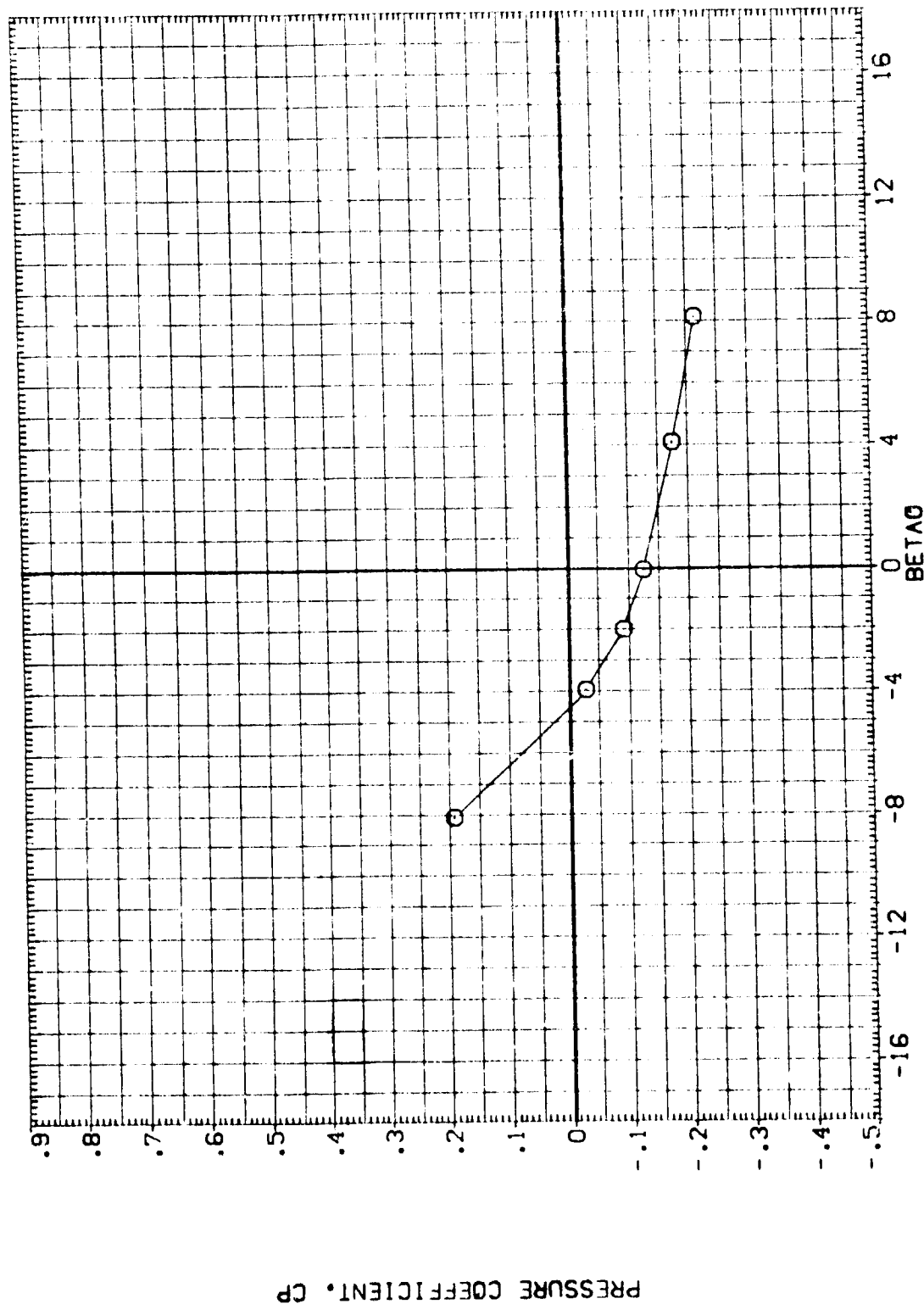
ARC11-716 1A14 01+T12+S12N25+AT10 OMS NOZZLE (RB1E33)

SYMBOL PH1 180.000

X/LNH .400

ALPHA0 4.300

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPDRK .000



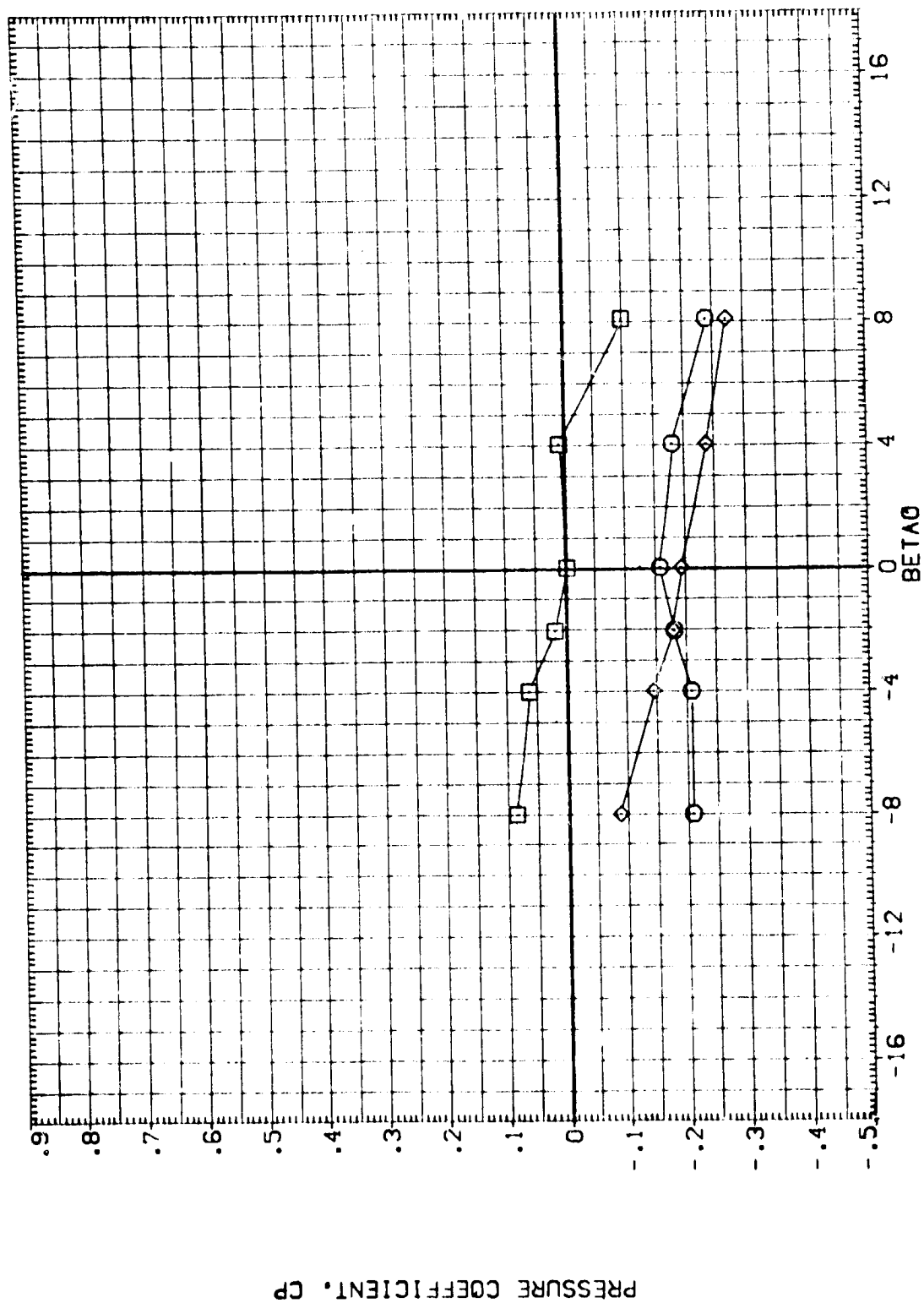
OMS NOZZLE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 QMS NOZZLE (RB1E33)

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPDBRK .000

PHI 135.000
 X/LIN .200
 ALPHA0 7.910

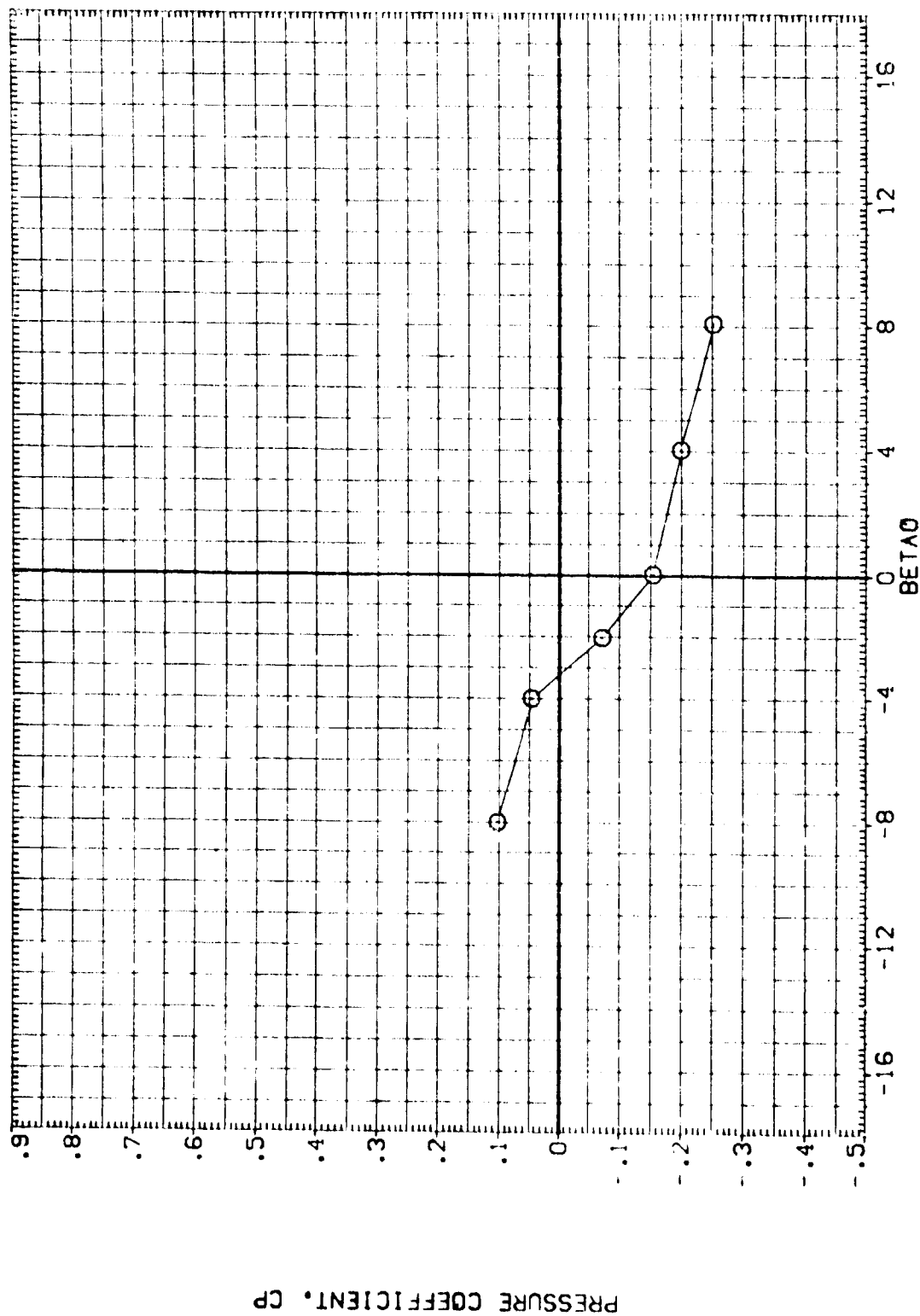
SYMBOL
 □ 135.000
 ◇ 180.000
 ◇ 225.000



QMS NOZZLE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 QMS NOZZLE (RB1E33)

SYMBOL	PHI	X/LNH	ALPHA	MACH	PARAMETRIC VALUES
0	180.000	.400	7.910	RUDDER	1.250 ELEVON .000
					SPOILER .000



QMS NOZZLE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM NOZZLE

(RB1X33)

SYMBOL

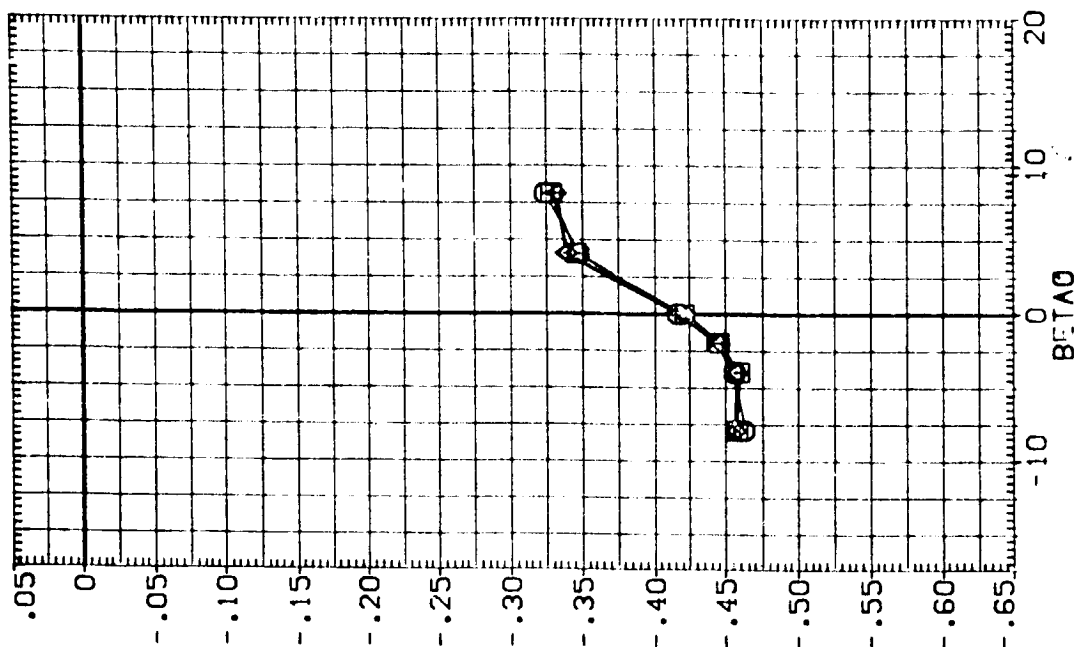
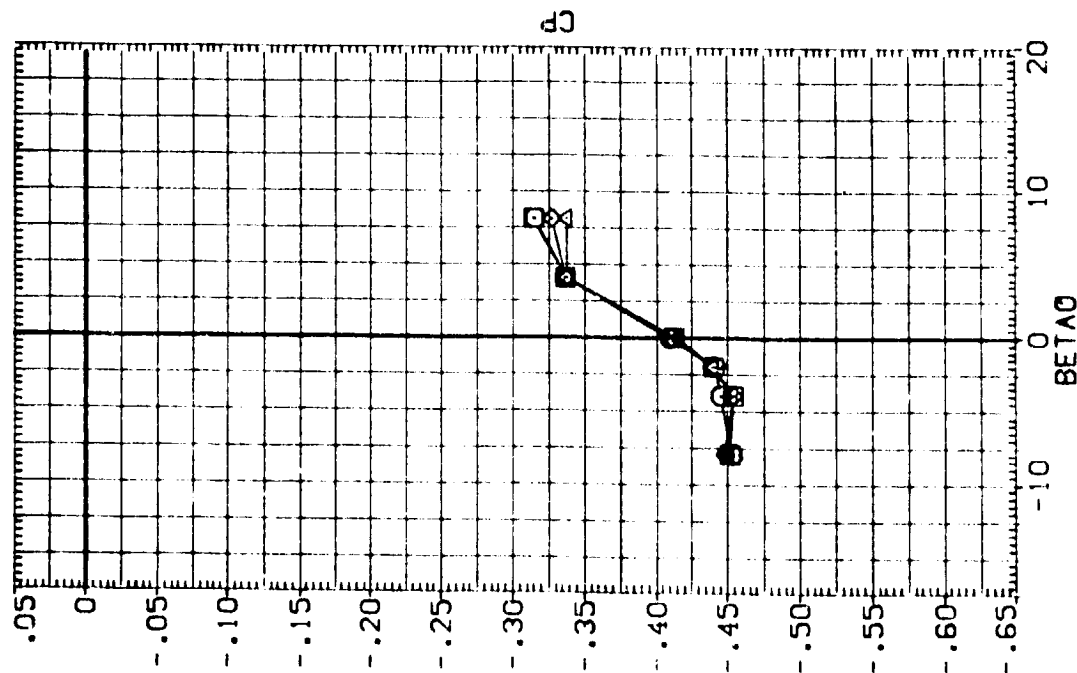
PHI .000
45.000
90.000
135.000

X/L S .948
.979

ALPHA 0
-8.220

MACH
RUDDER

PARAMETRIC VALUES
1.250
.000
ELEVON
SPDRK
.000
.000



SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE (RB1X33)

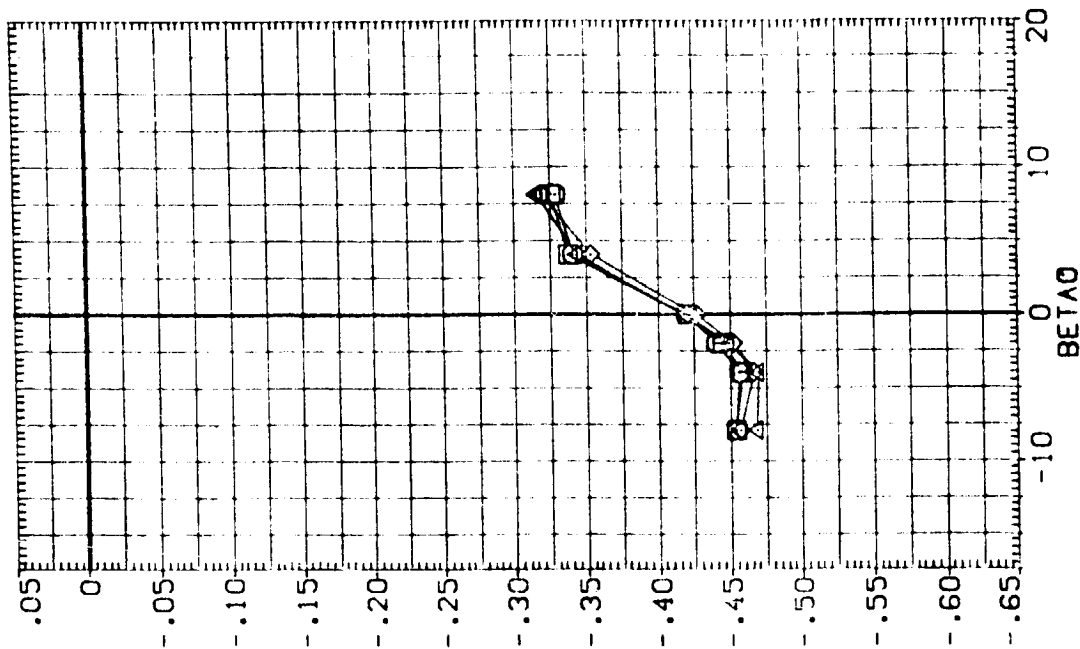
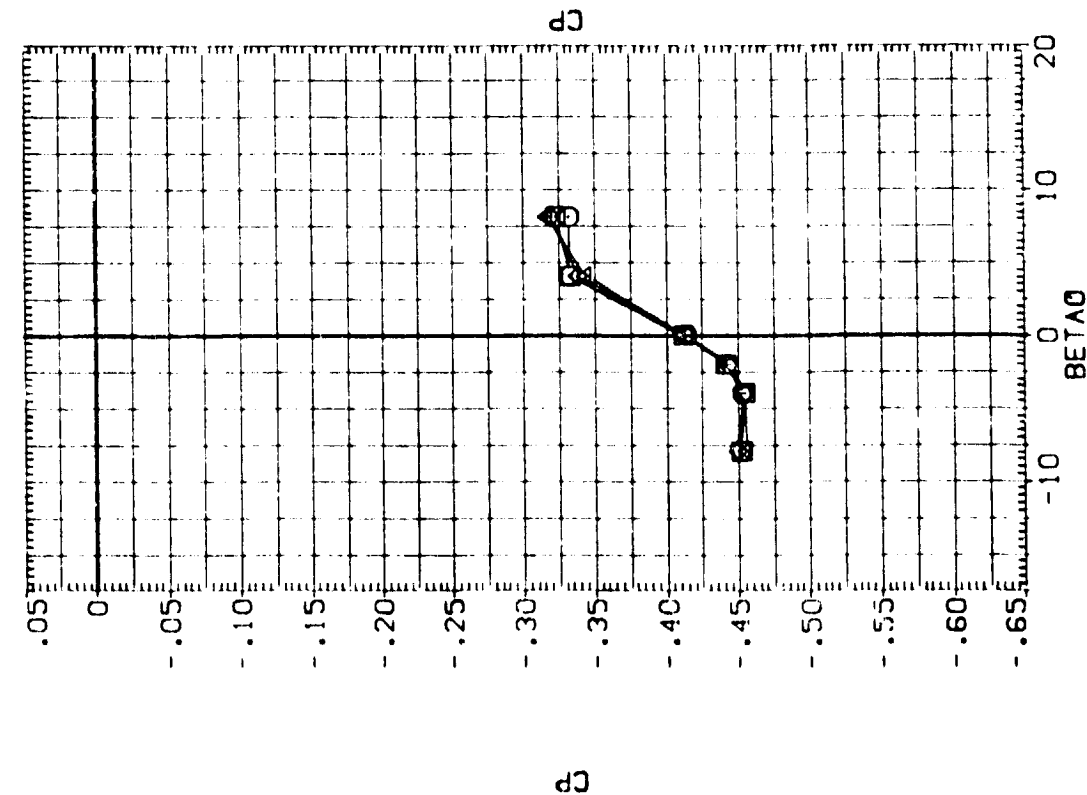
SYMBO

PHI
180.000
225.000
270.000
315.000

X/L5
.948
.979

ALPHA0
-8.220

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPDBRK .000



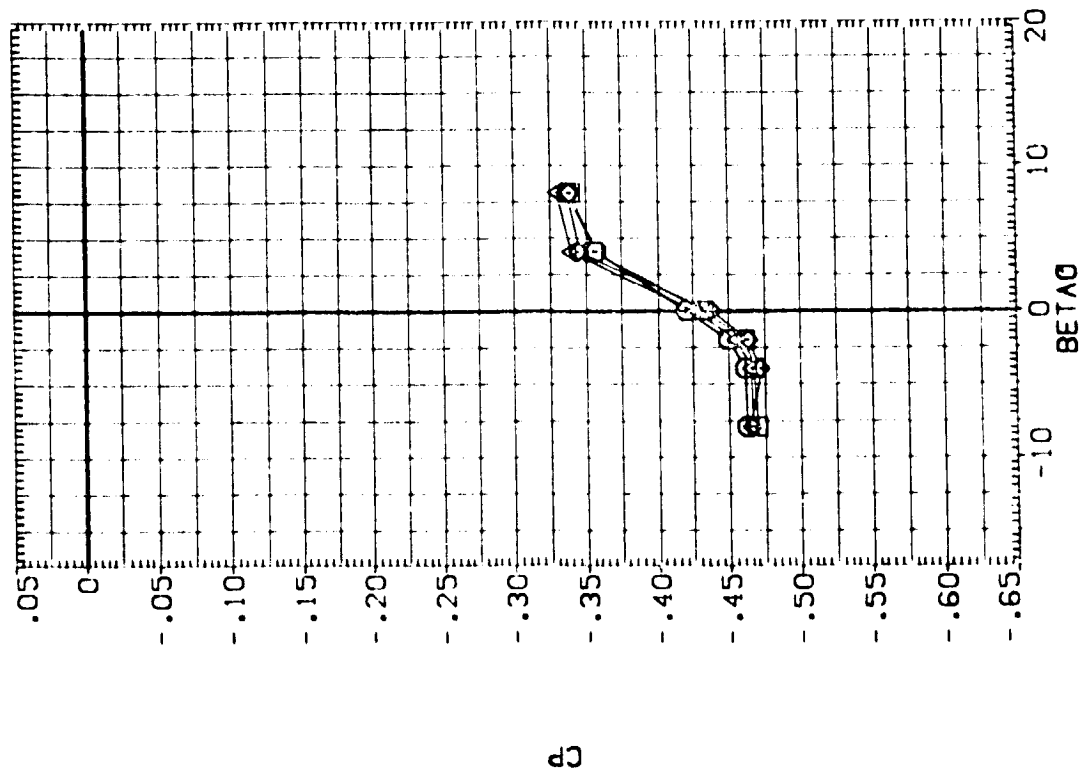
SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE

(RB1X33)

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOBRK .000

SYMBOL PHI X/LS ALPHA
 O .000 .993 -8.220
 ◇ 45.000
 △ 90.000
 135.000



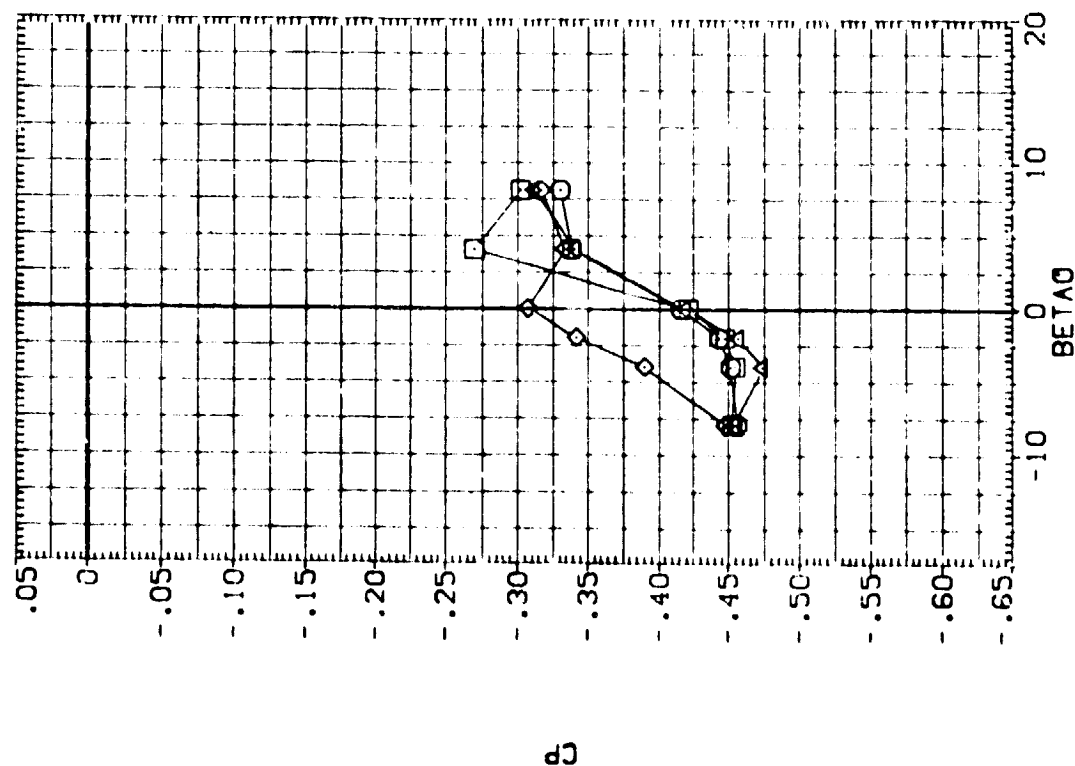
SRM BOOSTER BASE PRESSURES

(R81X33)

ARC11-716 IA14 01+I12+S12N25+AT10 SRM NOZZLE

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOBRK .000

PHI X/LS ALPHA0
180.000 .993 -8.220
275.000
270.000
315.000

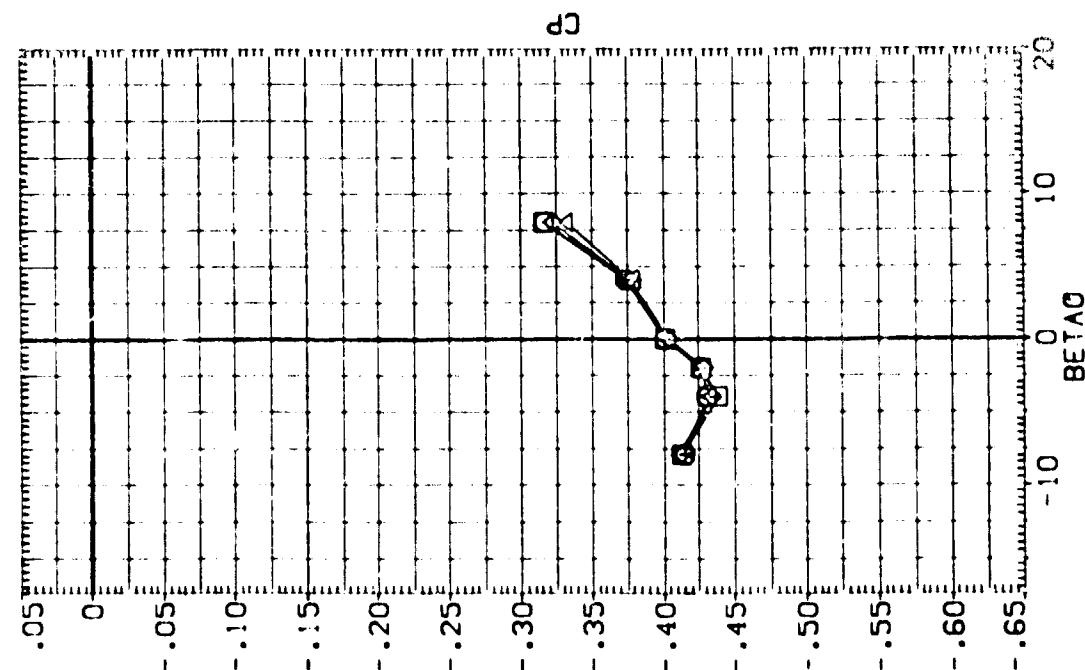
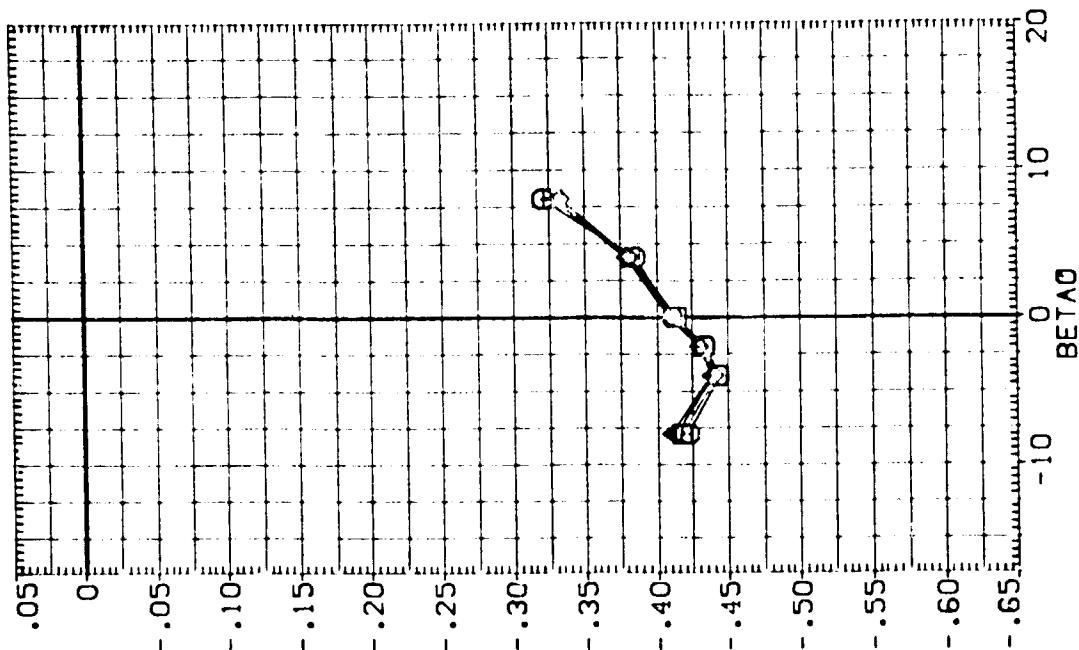


SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+T'2+S12N25+AT10 SRM NOZZLE (RB1X33)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000

SYMBOL P-HI X/L/S ALPHA0
O .000 .948 -4.200
◇ 15.000 .979
△ 90.000
▽ 135.000



SRM BOOSTER BASE PRESSURES

ARC11-016 IA14 01+112-S12N25+A110 SRM NOZZLE (RB1X33)

SYMBOL

○
□
◇
△

P-1
180.000
225.000
270.000
315.000

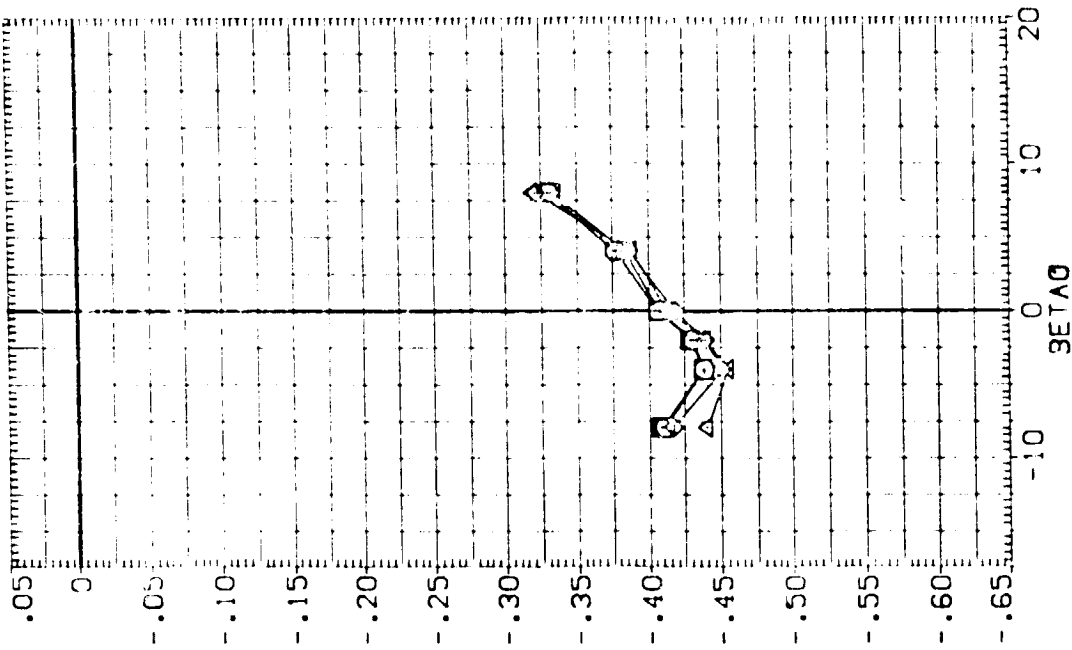
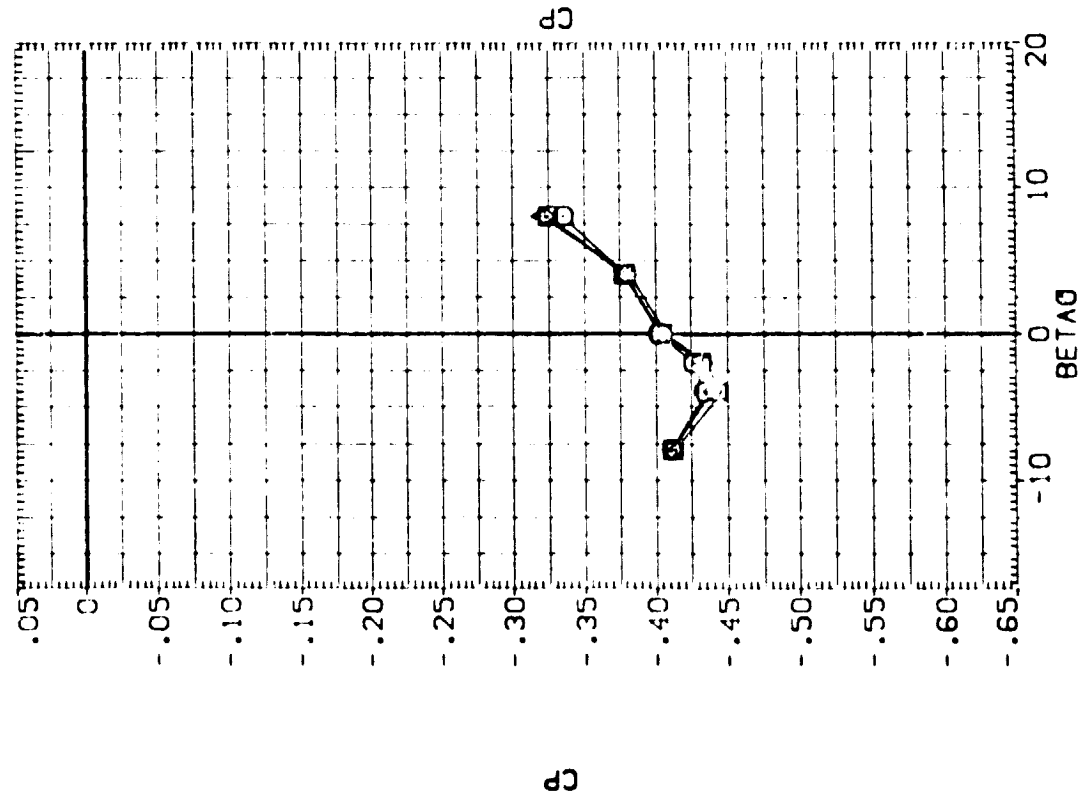
X/LS
.948
.979

ALPHA0
-4.200

PARAMETRIC VALUES

1.250
.000
ELEVEN
SPC9M
.000
.000

MACH
RUDDER



SRM BOOSTER BASE PRESSURES

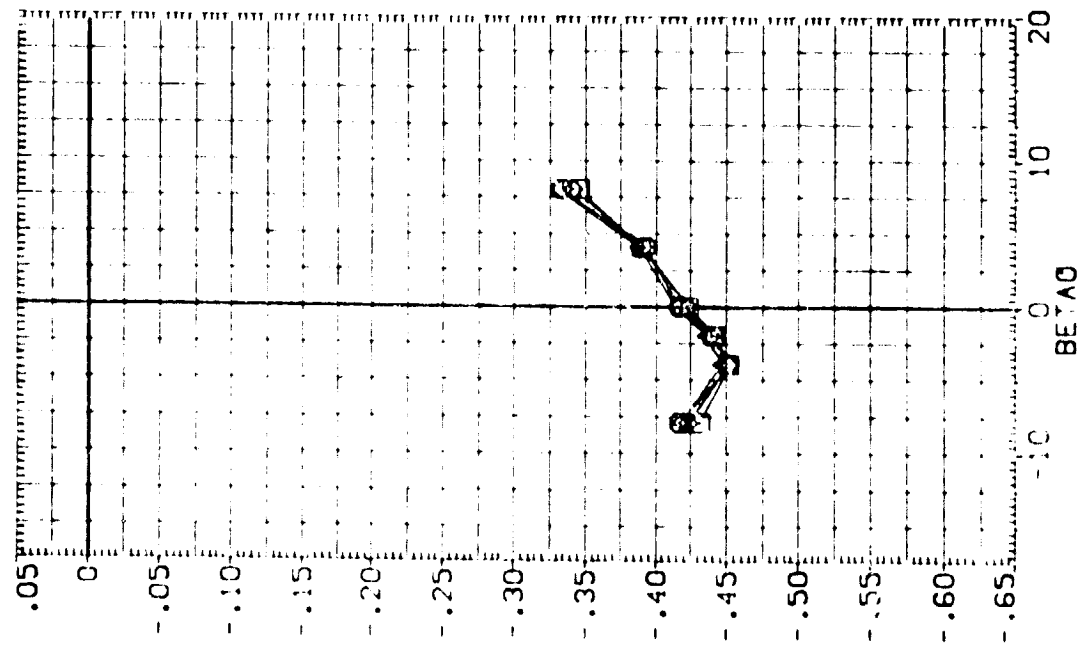
ARC:11-716 :A14 01+112+S12N25+A110 SRM NOZZLE (R31X33)

SYMBOL

PHI .000
45.000
90.000
135.000

X/LS .993
ALPHA0 -4.200

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPDBRK .000



5

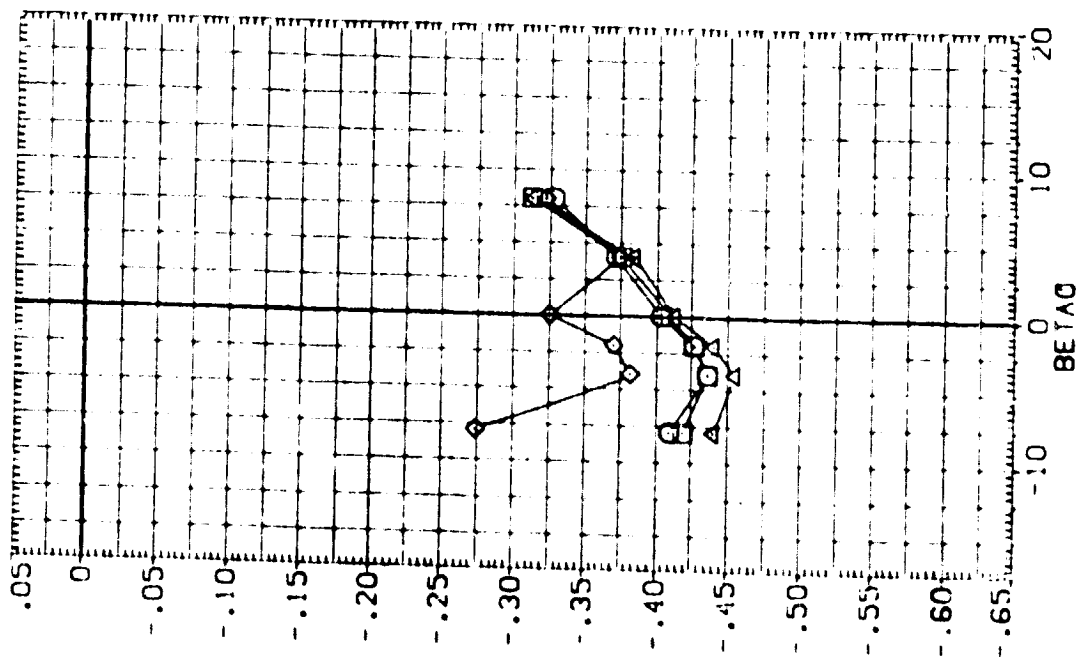
SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE

(RB1X33)

SRM NO. P-1 X/L S P-40
 180.000 .993 -4.200
 275.000
 270.000
 315.000

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000



SRM BOOSTER BASE PRESSURES

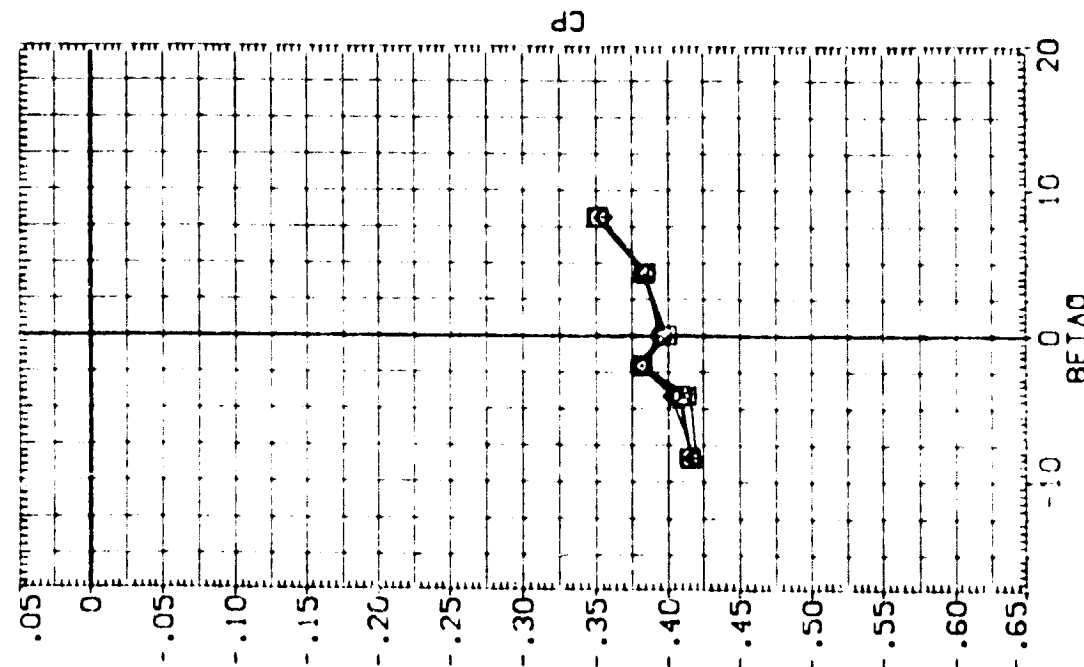
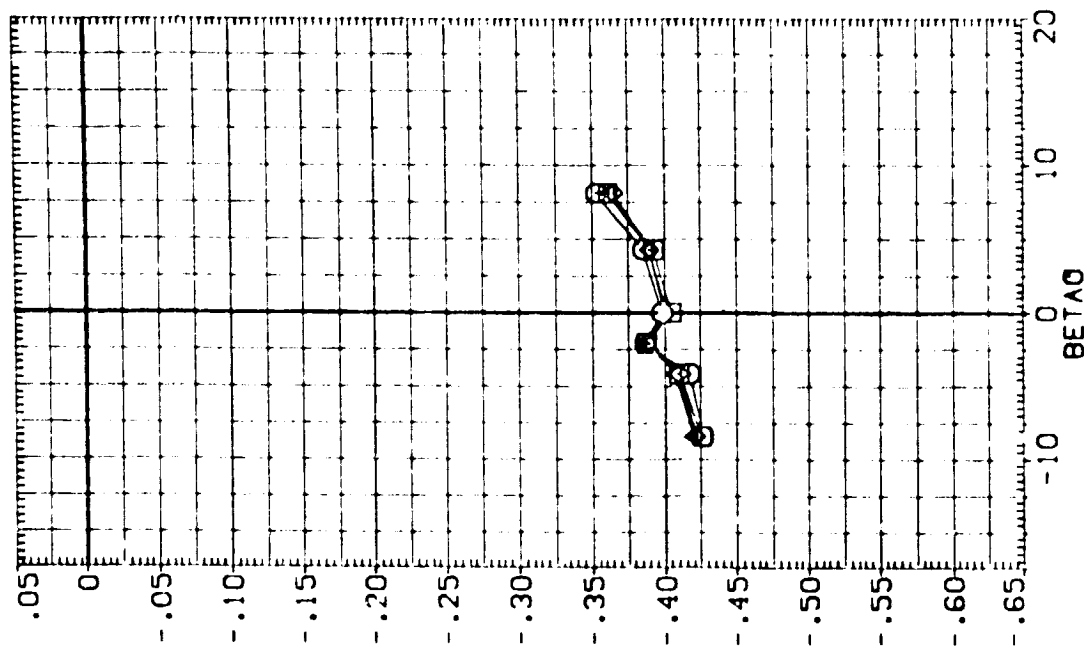
ARC11-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE (R81X33)

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOBRK .000

1A0H
RUDDER

PHI .000 X/L5 .948 ALPHA03 -.760
45.000 .879
90.000
135.000

SYMBOL
O □ ◇ △



SRM BOOSTER BASE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM NOZZLE (RB1X33)

SYMBOL

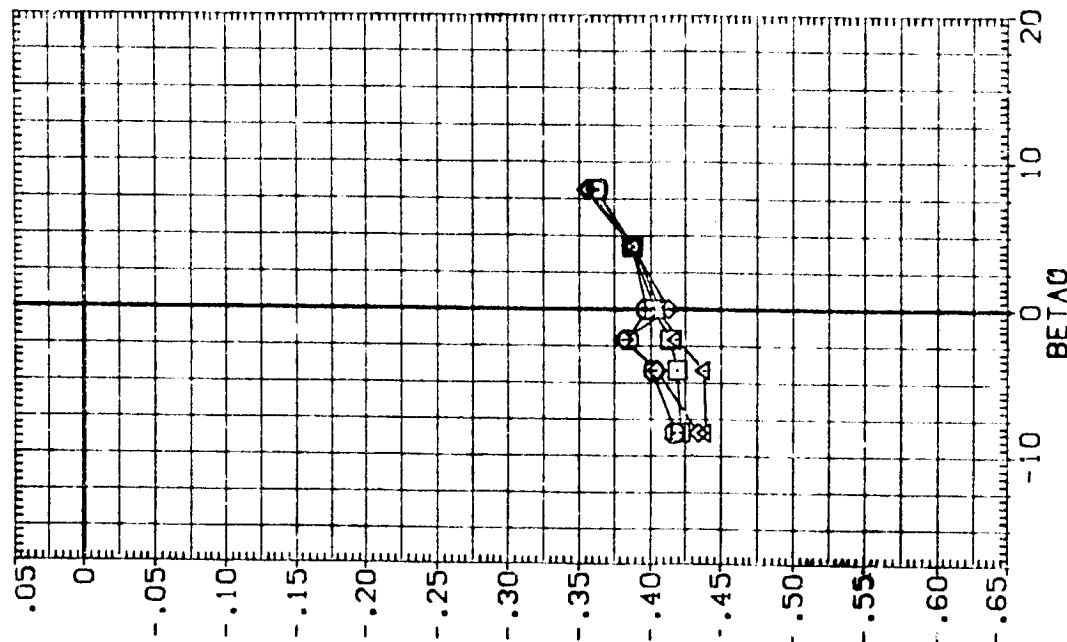
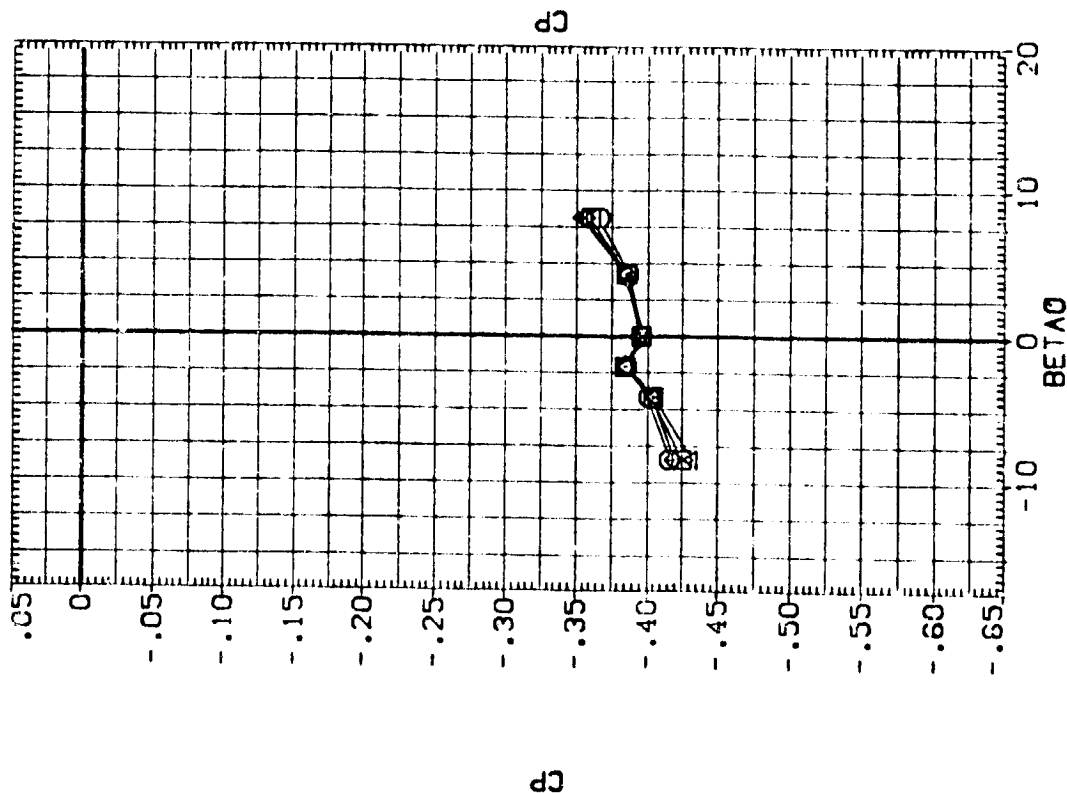
PHI 180.000
225.000
270.000
315.000

X/LS .948
.979

ALPHA0 -.760

MACH
RUDDER

PARAMETRIC VALUES
1.250 ELEVJN .000
.000 SPEEDRK .000



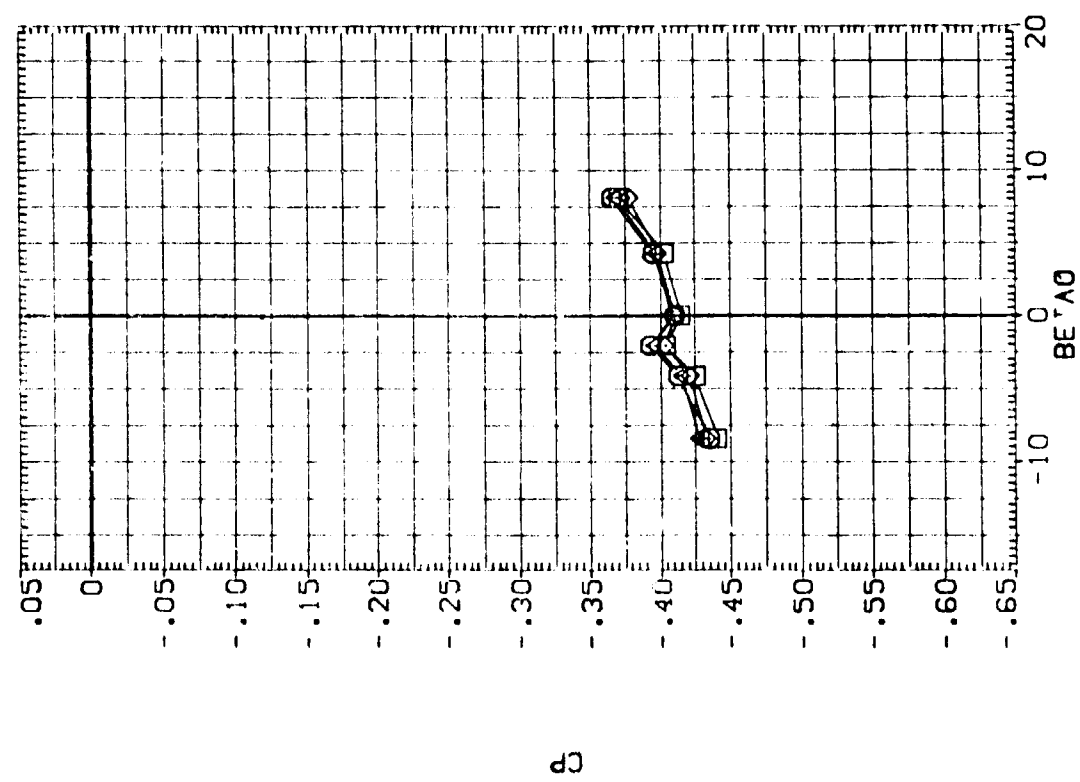
SRM BOOSTER BASE PRESSURES

(RB1X33)

ARC11-716 1A14 01-112+S12N25+AT10 SRM NOZZLE

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPEED .000

SYMBOL PHI X/Z/S ALPHA0
 0 0.000 .993 -.750
 45 0.000
 90 0.000
 135 0.000



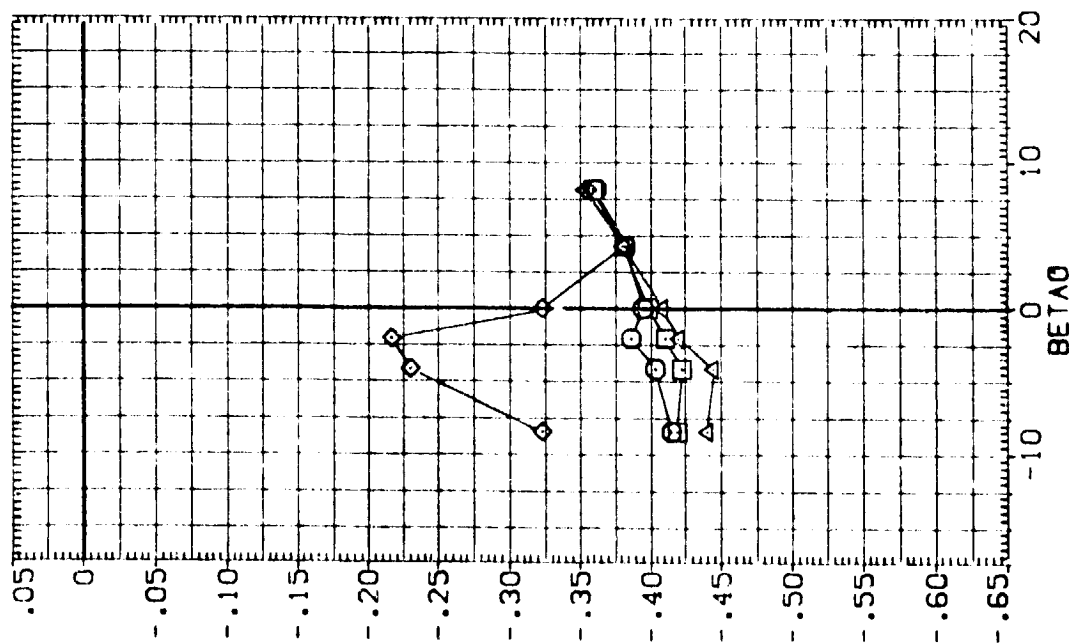
SRM BOOSTER BASE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 SRM NOZZLE

(RB1X33)

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000 SPOILER .000

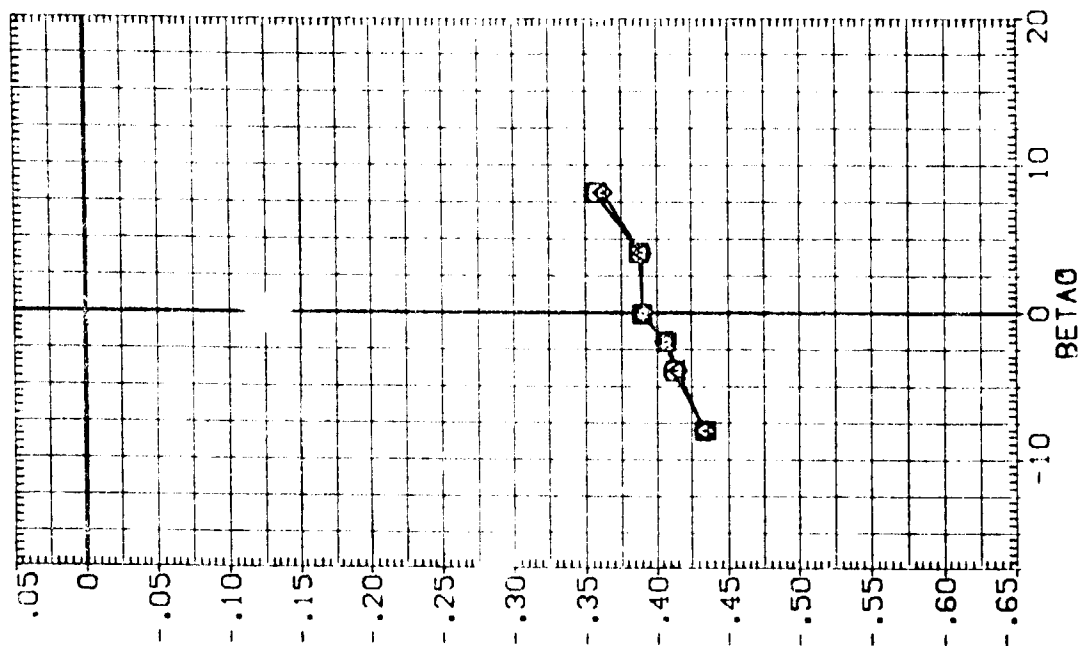
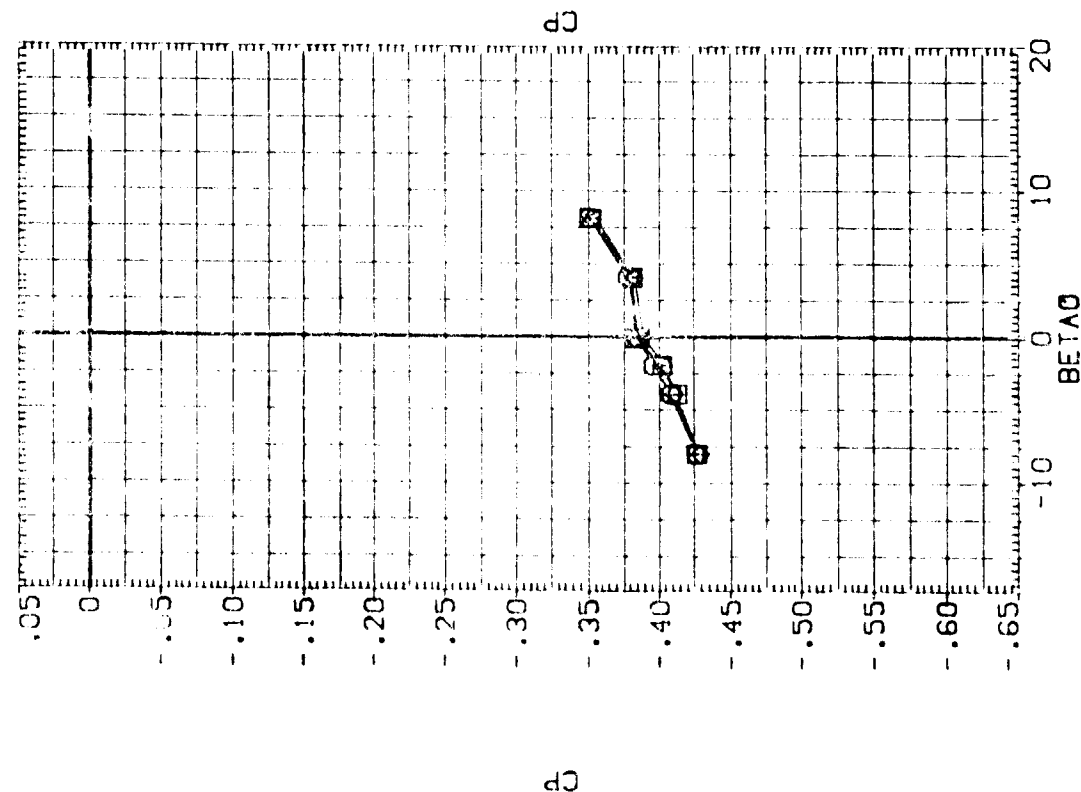
SYMBOL PHI X/LS ALPHA3
 180.000 .993 -.760
 225.000
 270.000
 315.000



SRM BOOSTER BASE PRESSURES

ARC11-716 1414 01+112+S12N25+AT10 SRM NOZZLE (RB1X33)

SYMBOL	PHI	X/L/S	ALPHA	MACH	ELEV	SP
○	.000	.948	4.30L	RUDDER	1.250	.000
□	45.000	.979			.000	.000
◇	50.000					
△	135.000					



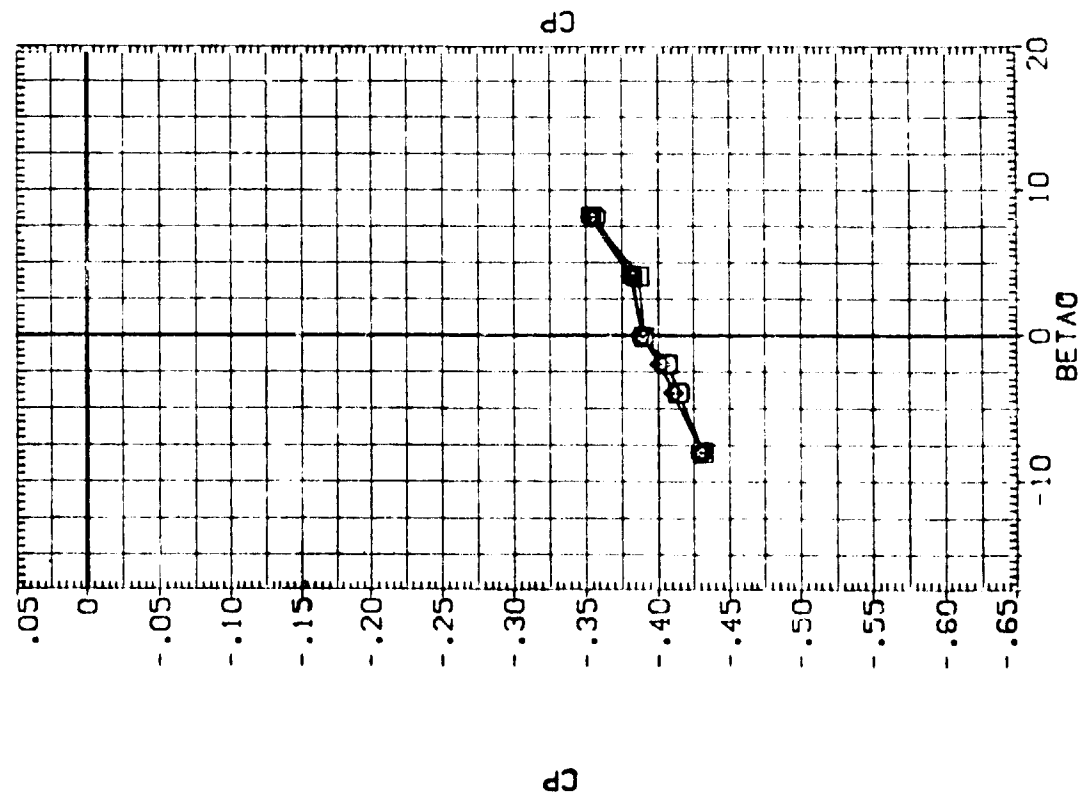
SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE (RB1X33)

SYMBOL

PHI	X/LS	ALPHA
180.000	.948	4.300
225.000	.979	
270.000		
315.000		

MACH	ELEVON	SPDR
1.250	.000	.000
RUDDER		



SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 SRM NOZZLE

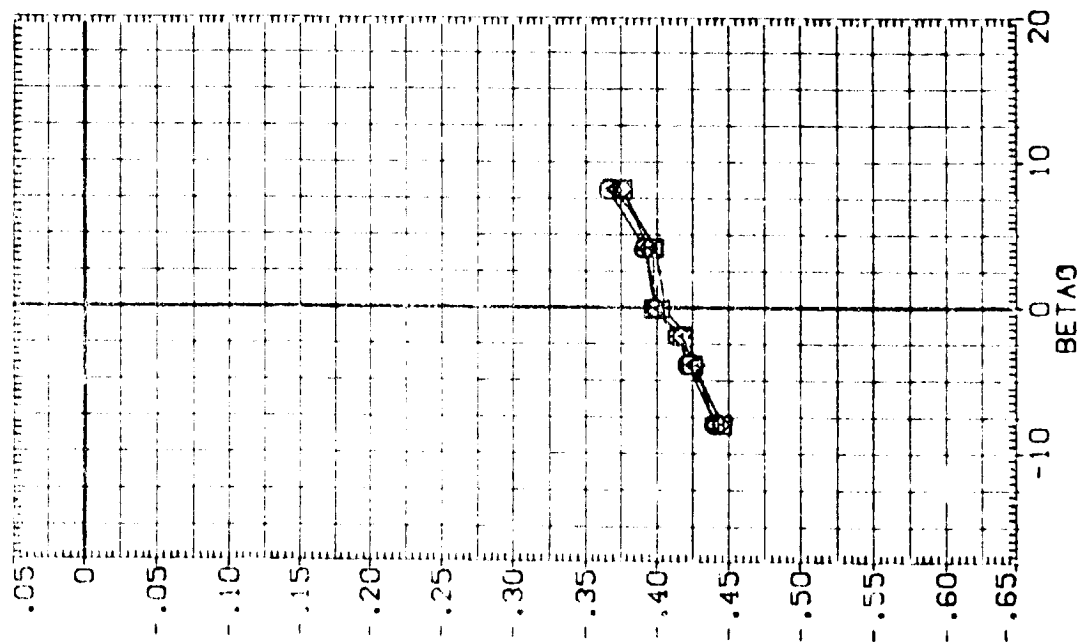
(RB1X33)

SYMBOL
 O □ ◇ △

PHI .000
 45.000
 90.000
 135.000

X/LS .993
 ALPHA0 4.300

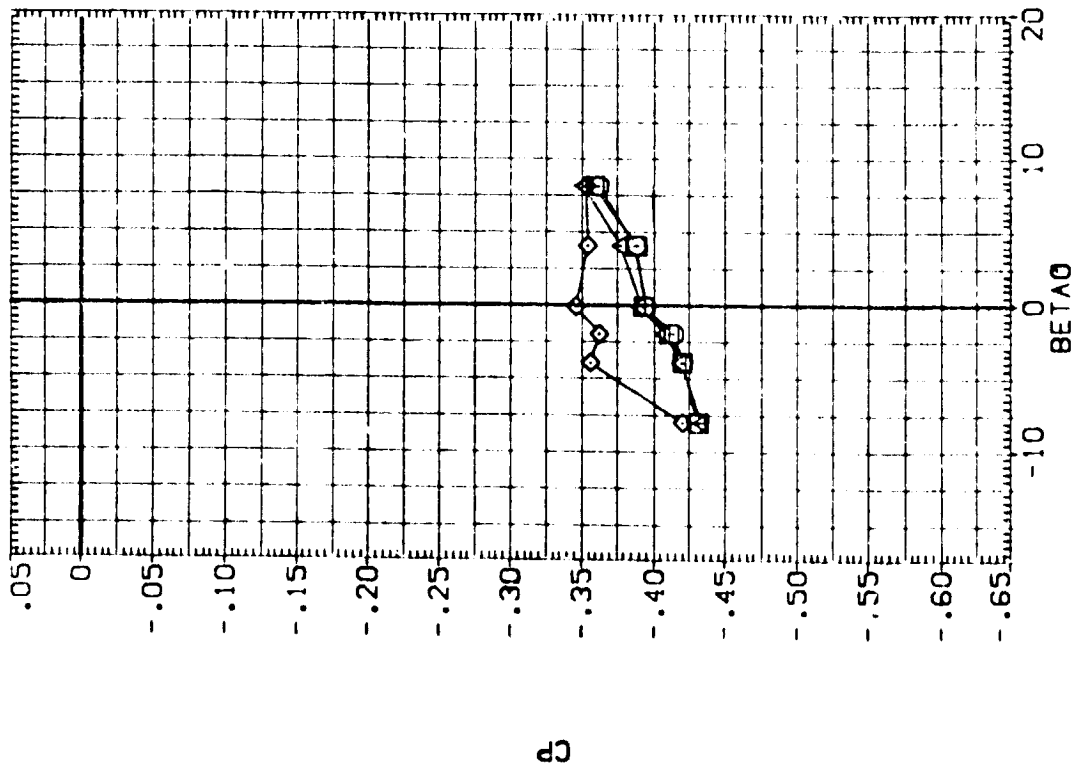
PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPDBK .000



SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE (RB1X33)

SYMBOL	PHI	X/LS	ALPHA0	PARAMETRIC VALUES
○	180.000	.993	4.300	MACH
□	225.000			RUDDER
◇	270.000			1.250
△	315.000			ELEVON
				.000
				SPDRBK
				.000



SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE (RB1X33)

SYMBOL
□
◇
△

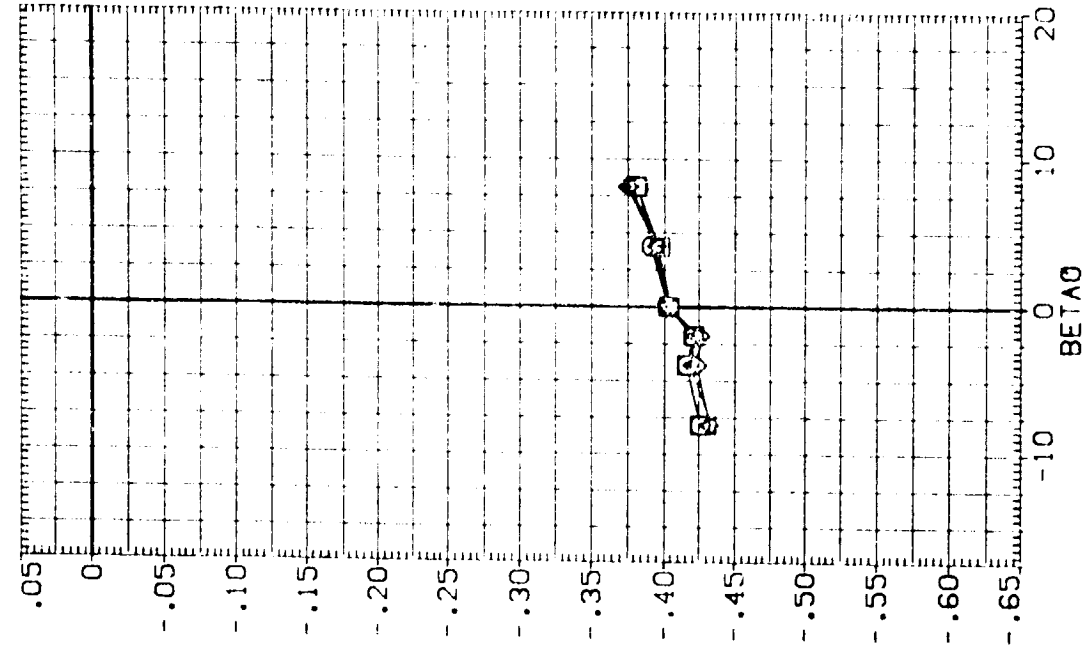
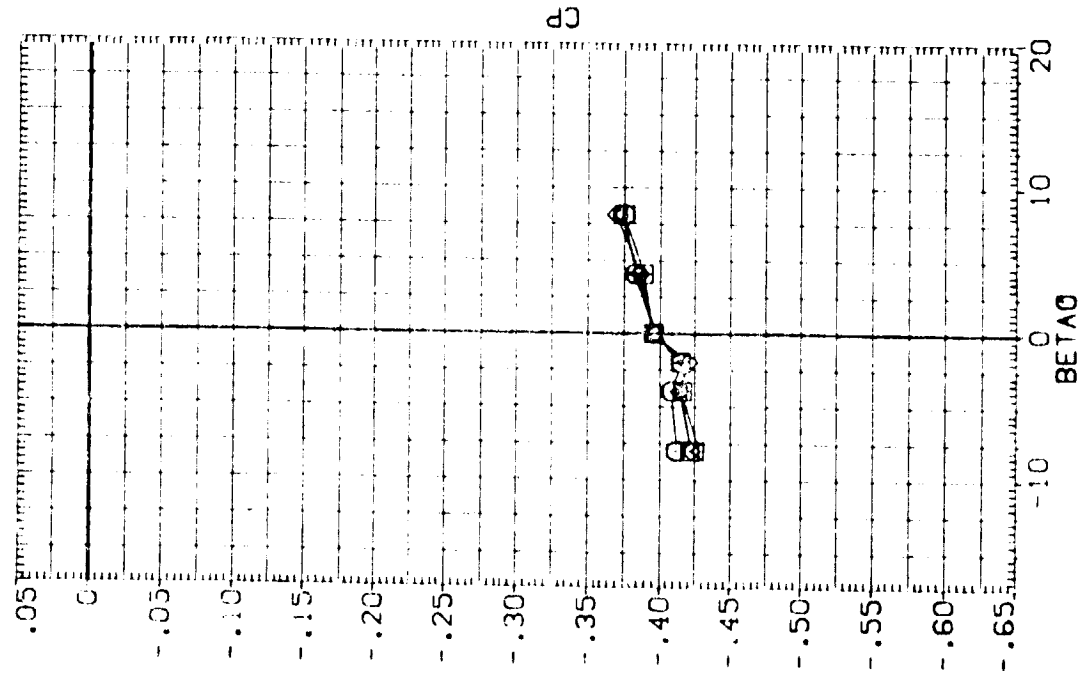
PHI
.000
45.000
90.000
135.000

X/L
.948
.979

ALPHA
7.910

MACH
RUDDER

PARAMETRIC VALUES
1.250
.000
ELEVON
SPDRK
.000
.000



SRM BOOSTER BASE PRESSURES

ARC1:-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE (RB1X33)

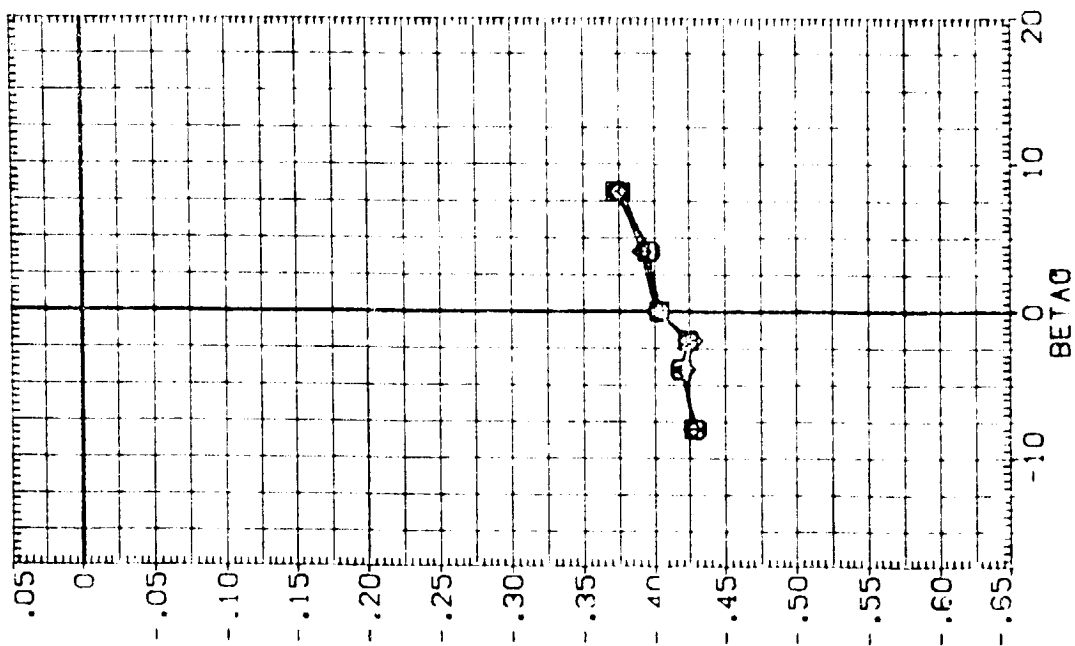
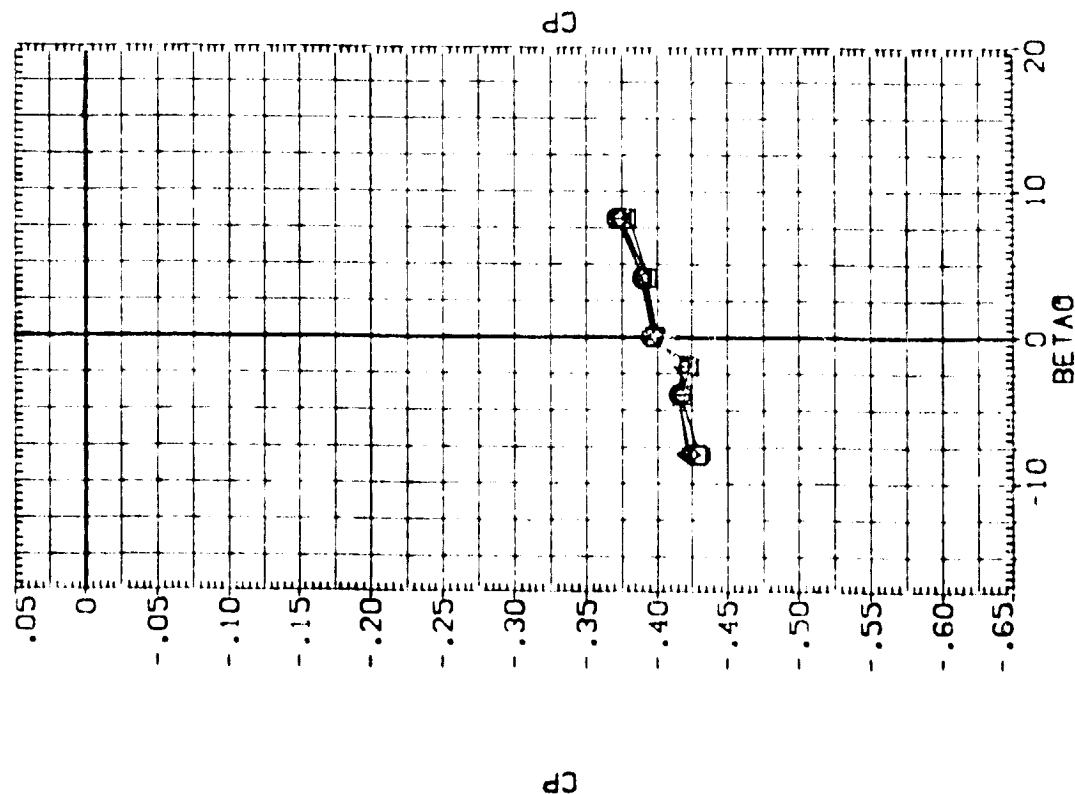
SYMBOL

PHI
180.000
225.000
270.000
315.000

X/LS
.948
.979

ALPHA0
7.910

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SPDRK .000



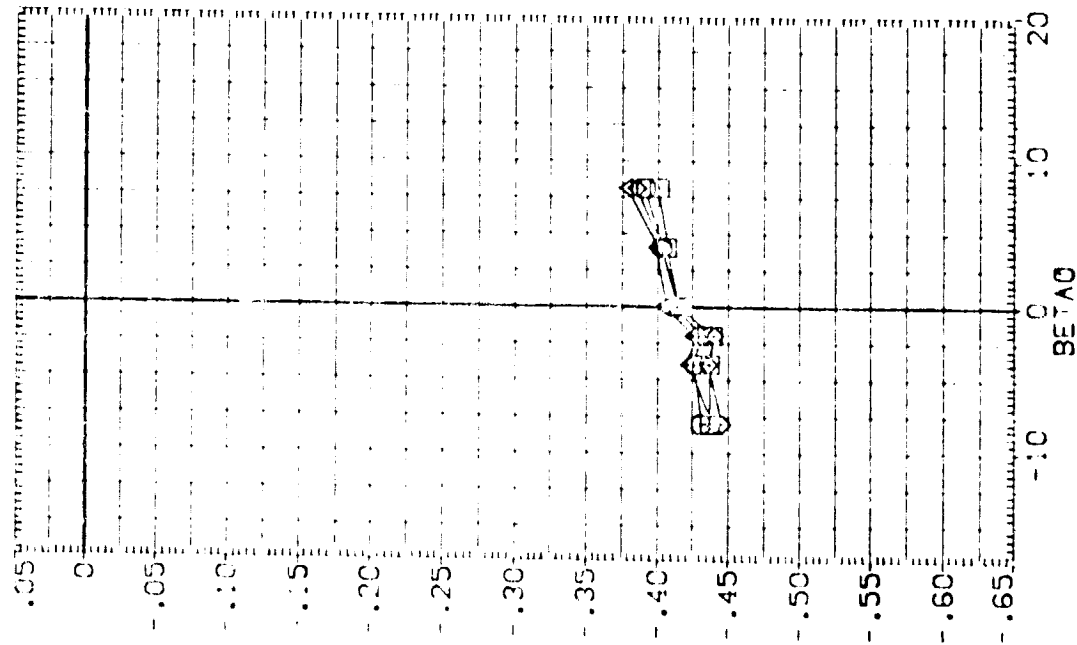
SRM BOOSTER BASE PRESSURES

(RB1X33)

ARC11-016 1A14 01+T12+S12N25+AT10 SRM NOZZLE

PARAMETRIC VALUES
 MAC- 1.250 ELEVON .000
 RUDDER .000 SPOBRK .000

SYMBOL PHI K/L/S ALPHA0
 01 01 .000 .993 0.0
 02 02 45.000
 03 03 90.000
 04 04 135.000



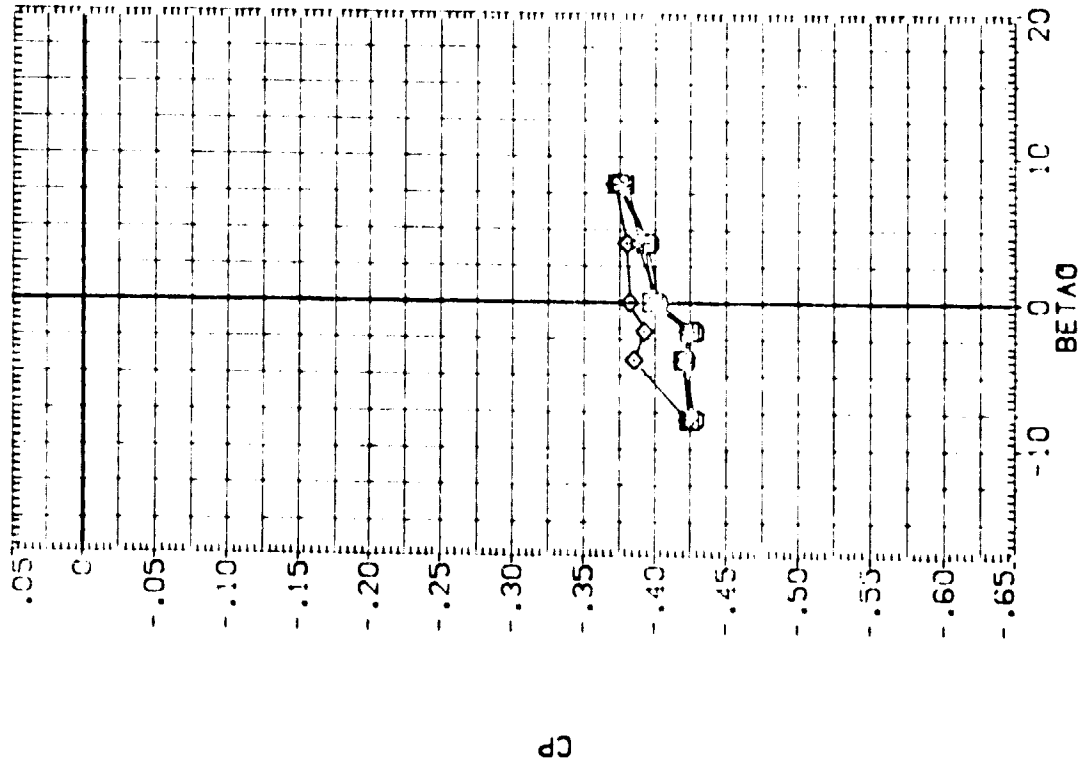
SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 SRM NOZZLE

(RB1X33)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000

SYMBOL PHI X/LS ALPHA0
O 180.000 .993 7.910
◇ 225.000
△ 270.000
▲ 315.000

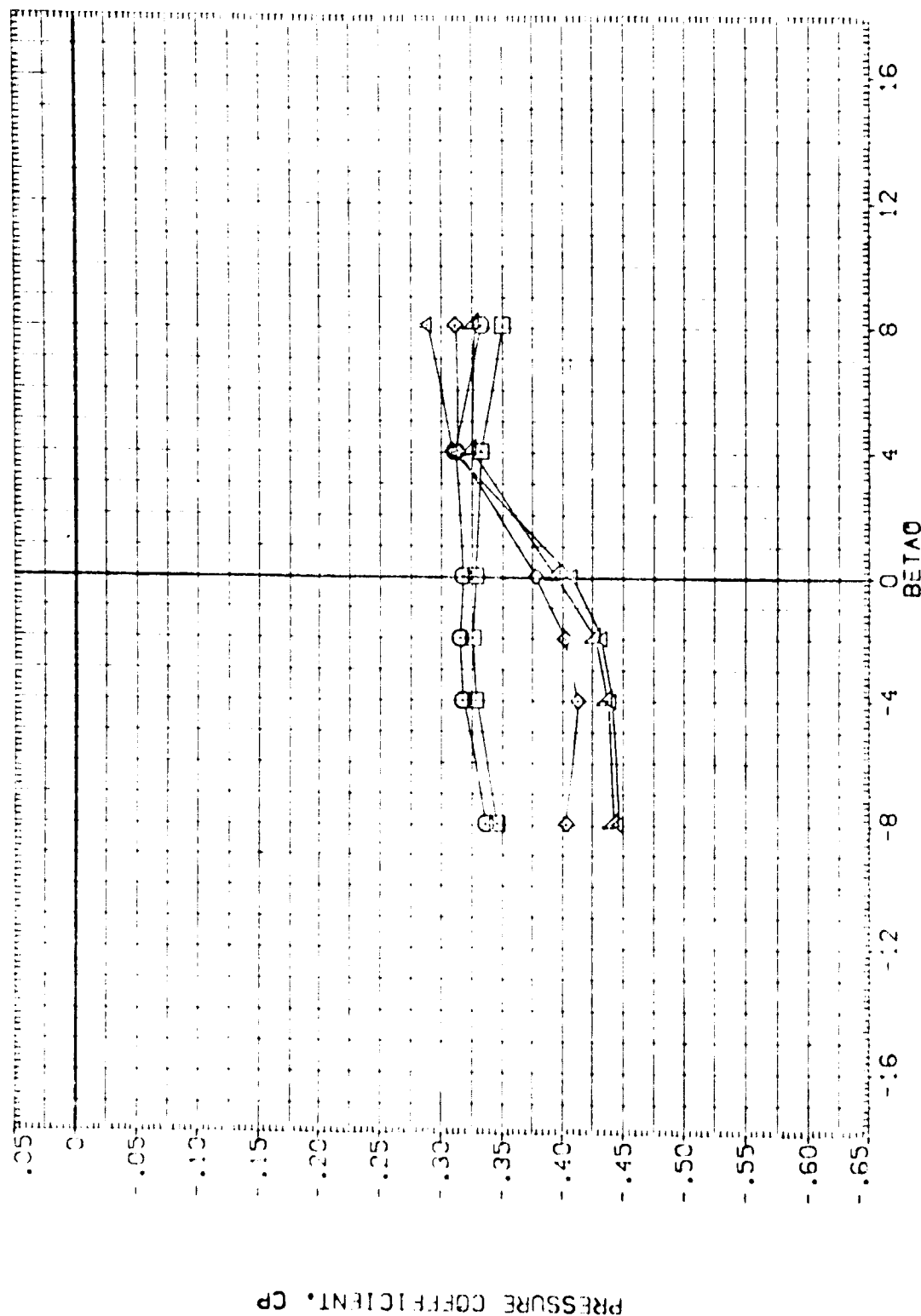


SRM BOOSTER BASE PRESSURES

ARC11-716 1A14 C1+112+S12N25+AT10 ET + SRM BASE (RB1Y33)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000

SYMBOL TAP NO ALPHA0
501.000 .000 -8.220
502.000
601.000
602.000
603.000

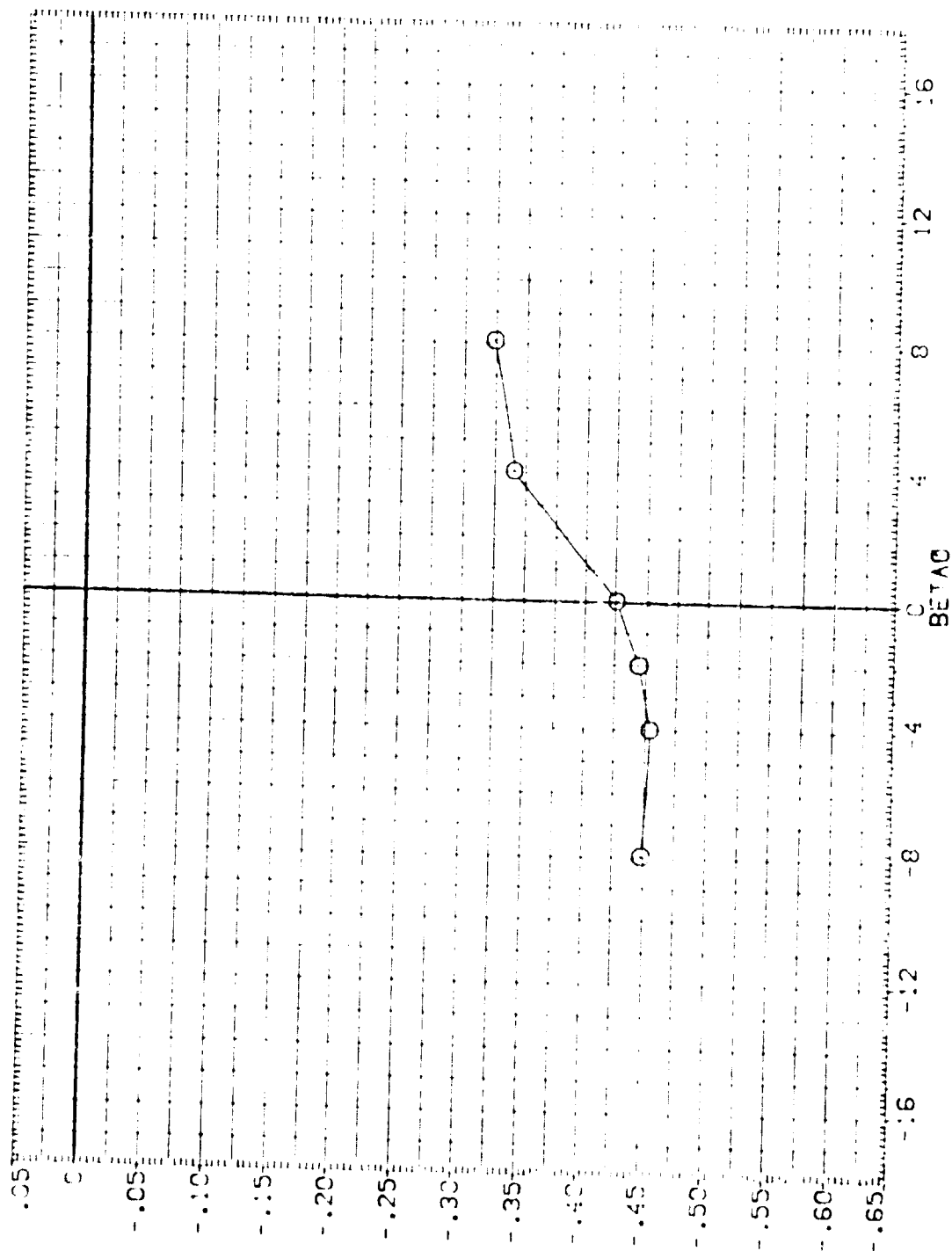


EXTERNAL TANK BASE PRESSURES

ARC11-7:6 1A14 01+T12+S12N25+AT10 ET + SRM BASE (RBIY33)

SYMBOL TAP NO 604.000 ALFAO -8.220

PARAMETRIC VALUES
MACM 1.250 ELEVON .000
RUDDER .000 SP/BRK .000



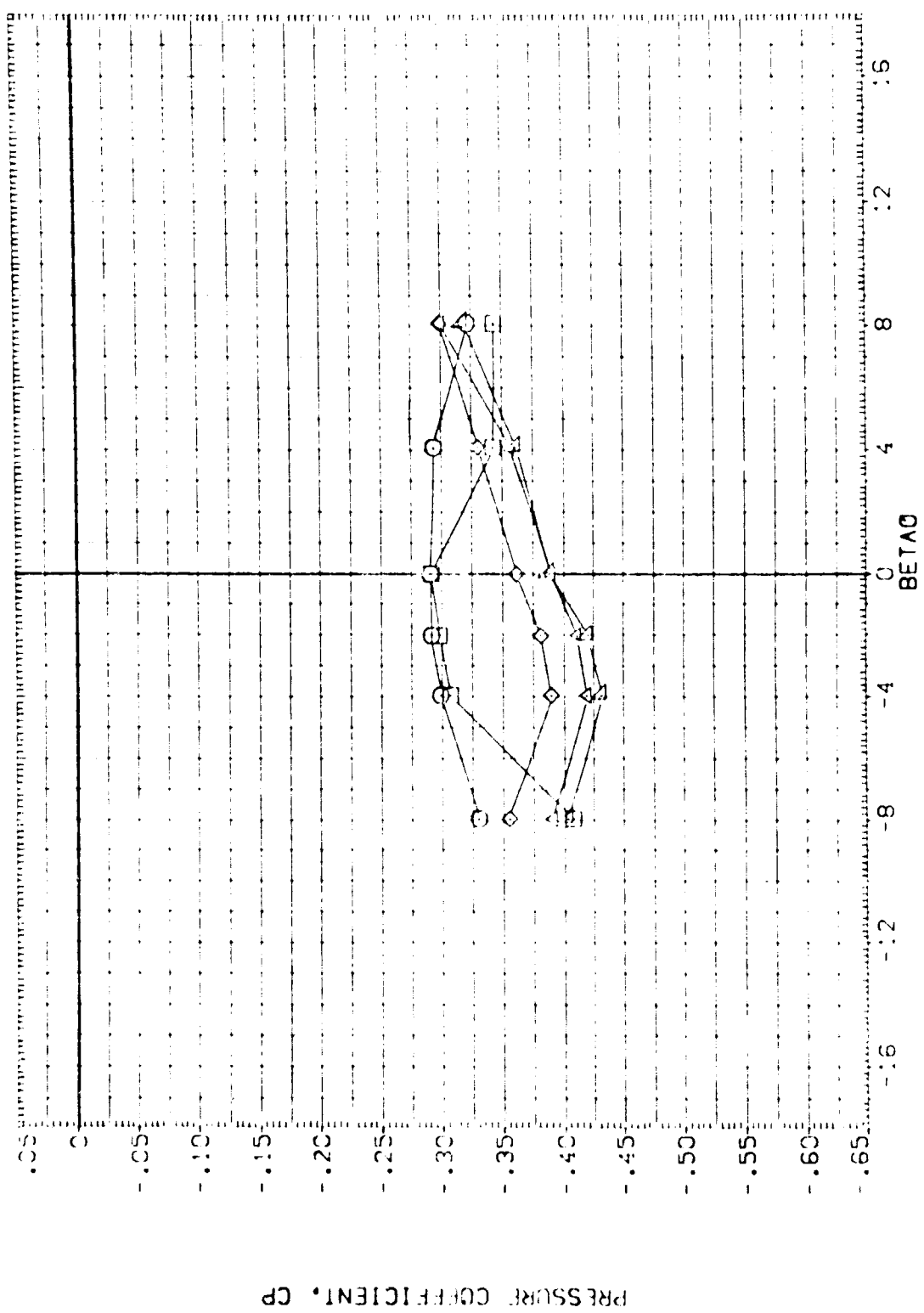
EXTERNAL TANK BASE PRESSURES

ARC: 11.716 1414 01.712+9.2+25+AT10 ET + SRM BASE (PB1Y33)

PARAMETRIC VALUES
 MACH 1.250
 ELEVEN 1.000
 RUDDER 1.000

TAP NO
 501.000
 502.000
 503.000
 504.000
 505.000

SY-80
 0110
 1111
 1112
 1113



EXTERNAL TANK BASE PRESSURES

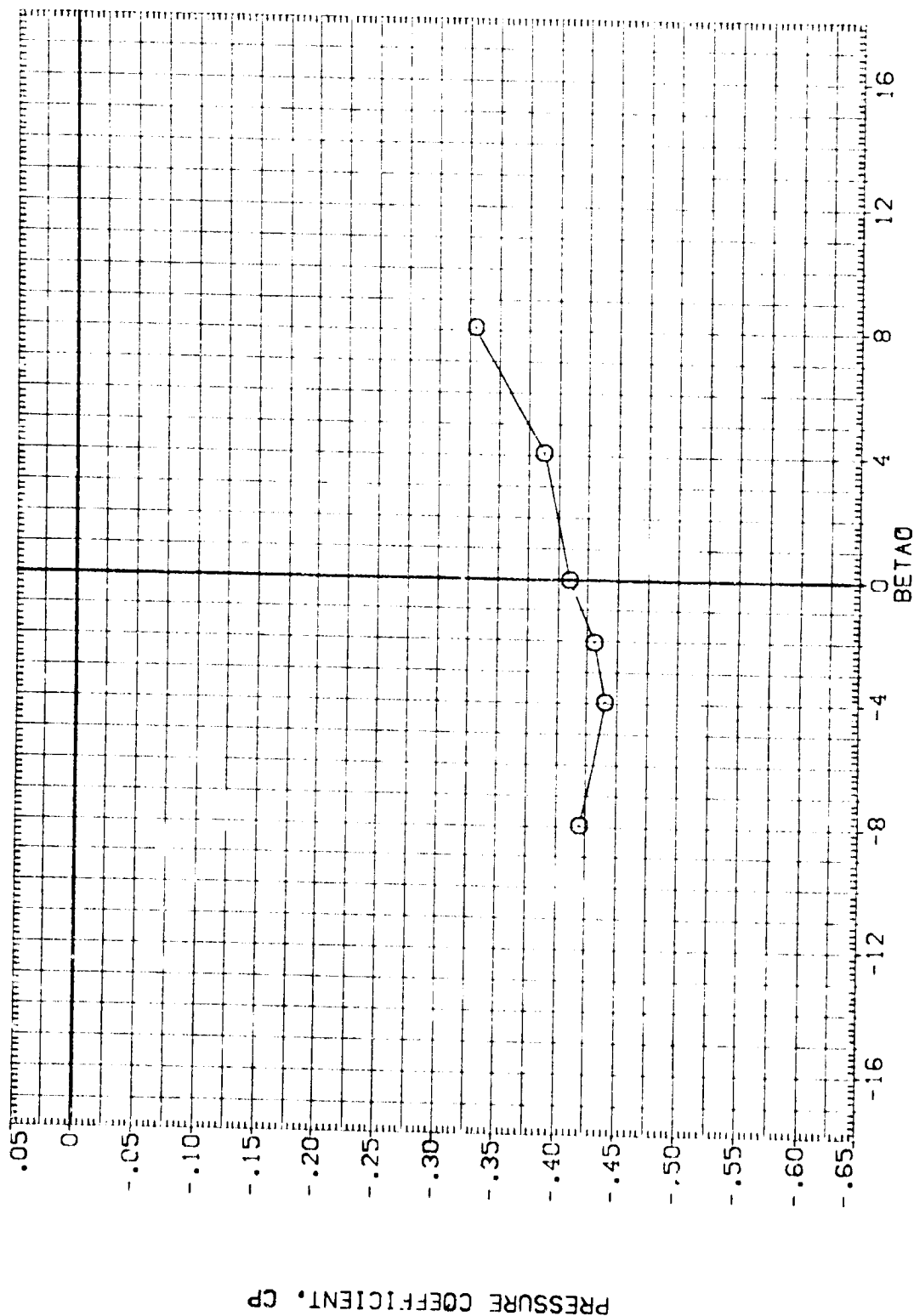
ARC11-716 1A14 01+T12+S12N25+AT10 ET + SRM BASE (RB1Y33)

SYMBOL TAP NO
O 804.000

ALPHA
-4.200

.000

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPDRK .000



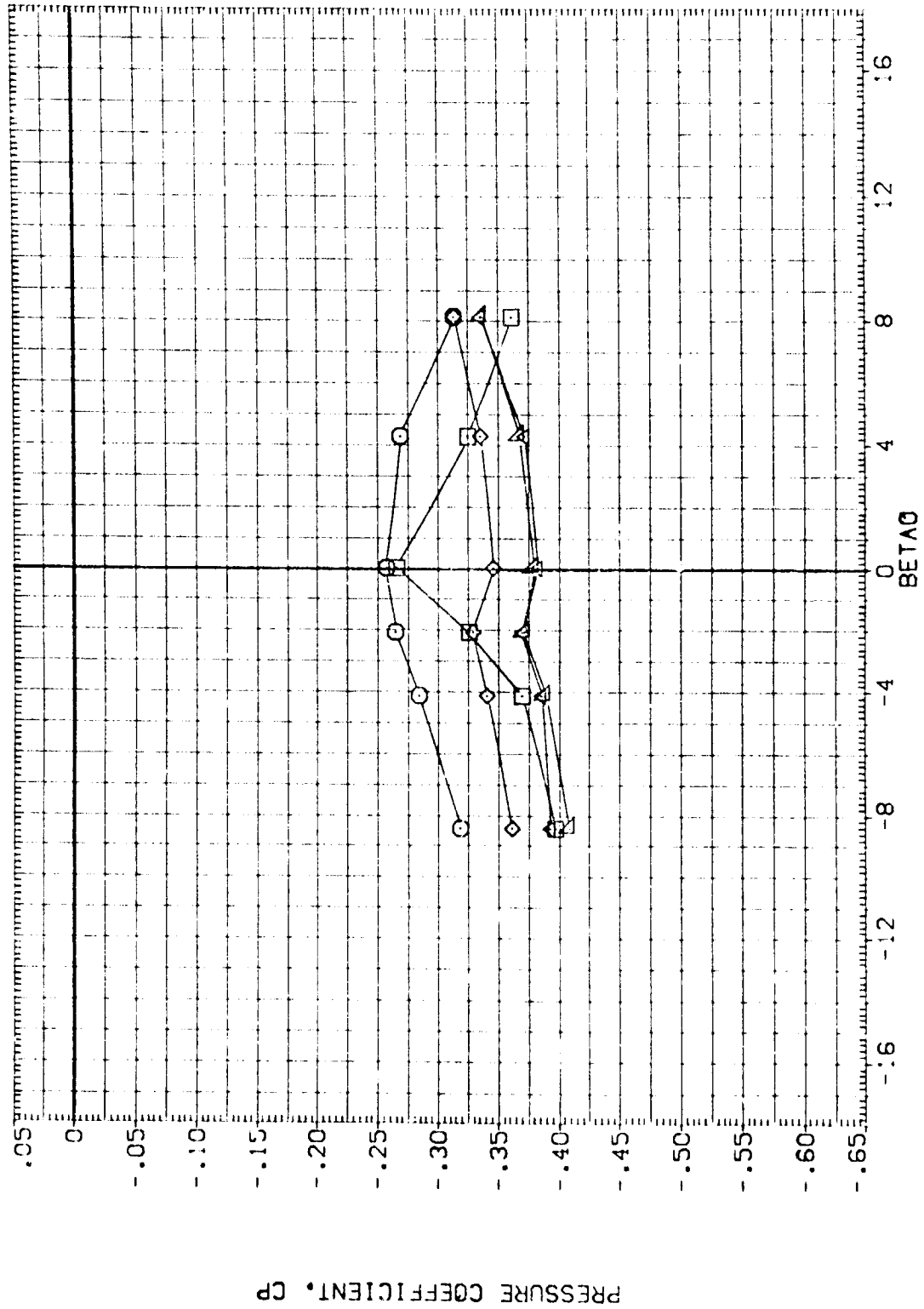
EXTERNAL TANK BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET + SRM BASE (RB1Y33)

SYMBOL TAP NO
 1.0 501.000
 1.0 502.000
 1.0 801.000
 1.0 802.000
 1.0 803.000

ALPHA0
 -.760

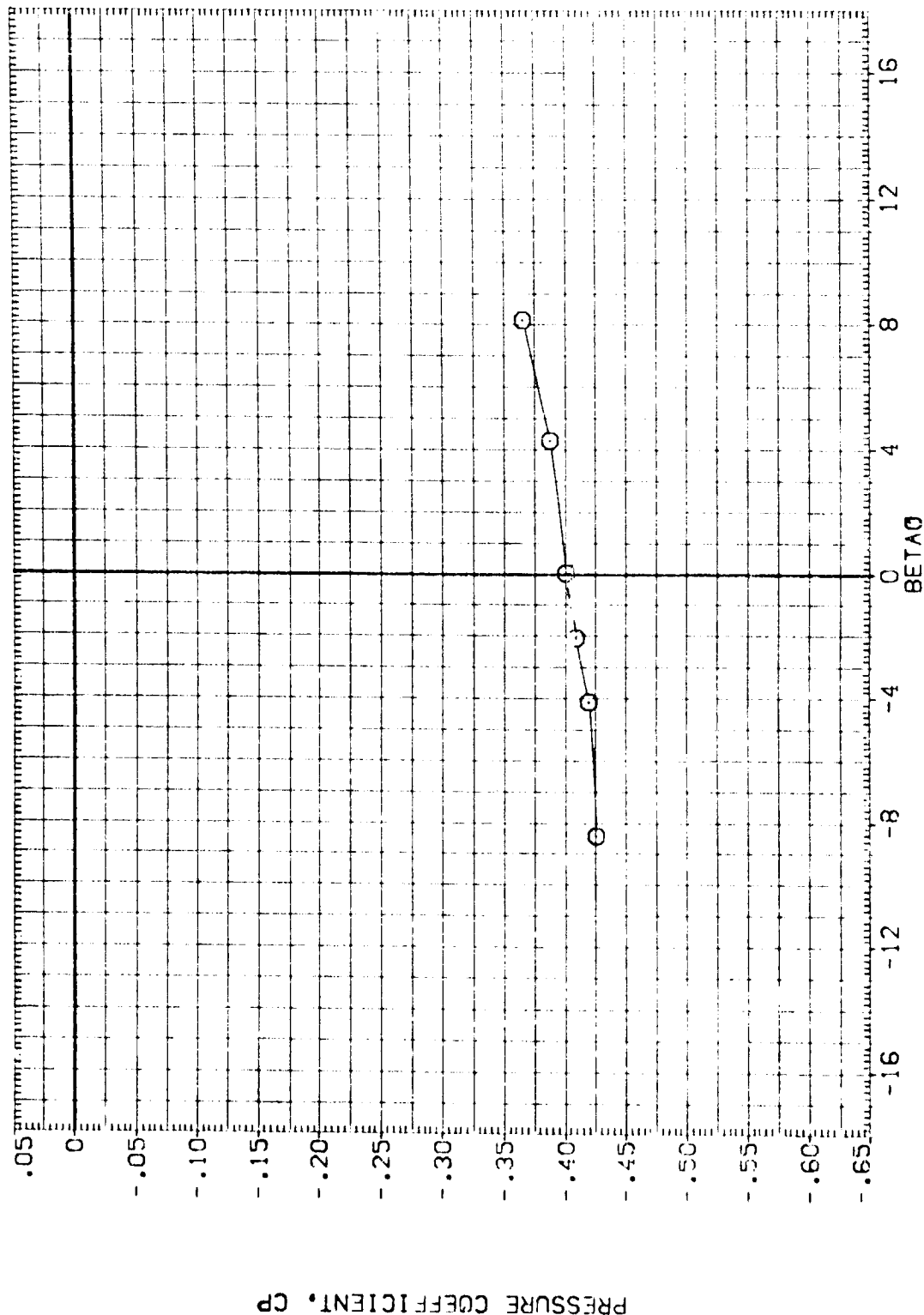
PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOILER .000



EXTERNAL TANK BASE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET + SRM BASE (RB1Y33)

SYMBOL	TAP NO	ALPHA	MACH	PARAMETRIC VALUES
○	804.000	-.760	RUDDER	1.250 ELEVON .000
				SPOBRK .000



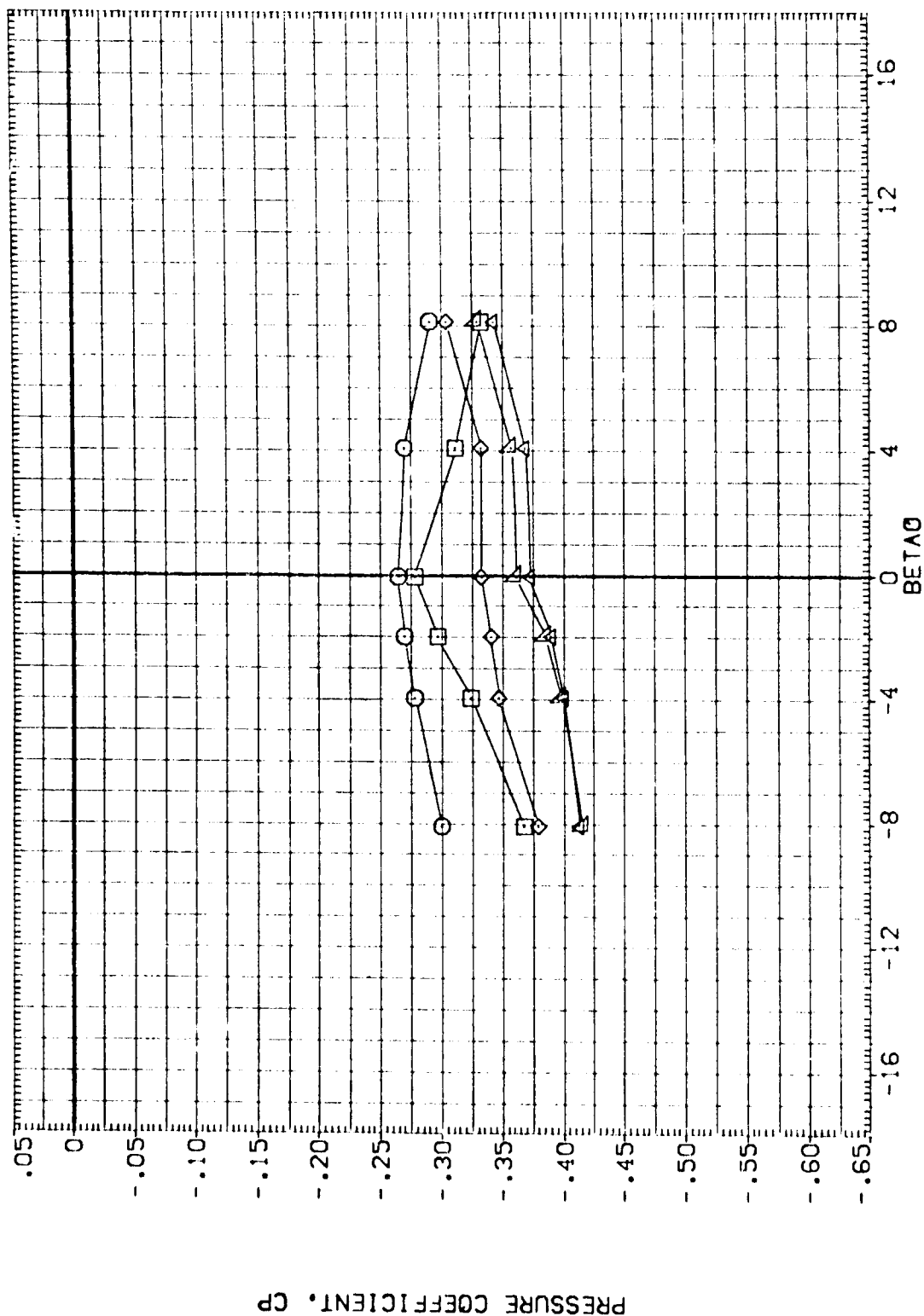
EXTERNAL TANK BASE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ET + SRM BASE (RB1Y33)

SYMBOL TAP NO
 ○ 501.000
 □ 502.000
 ◇ 801.000
 △ 802.000
 ▲ 803.000

ALPHA
 .000 4.300

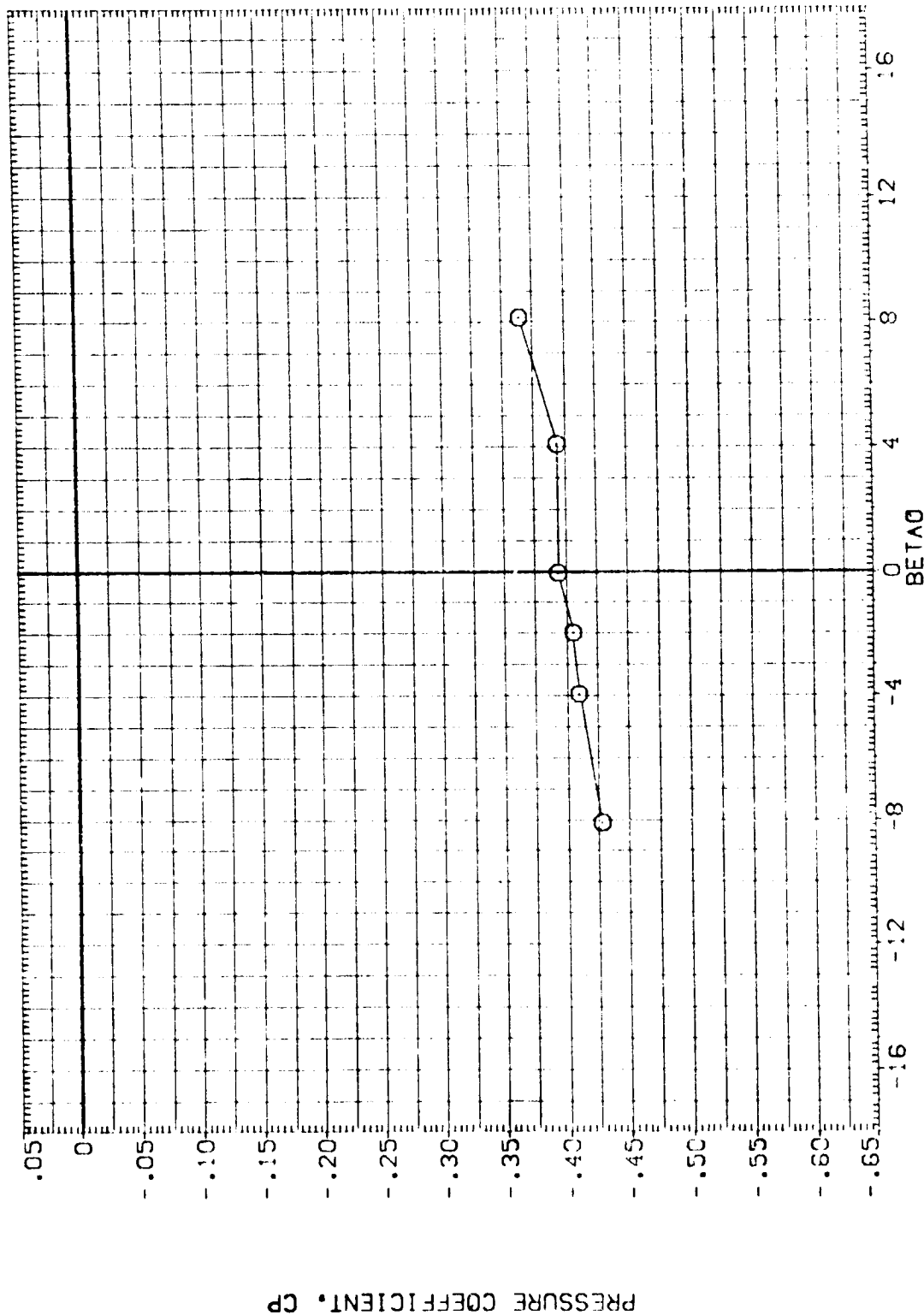
PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPDRK .000



EXTERNAL TANK BASE PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ET + SRM BASE (RB1Y33)

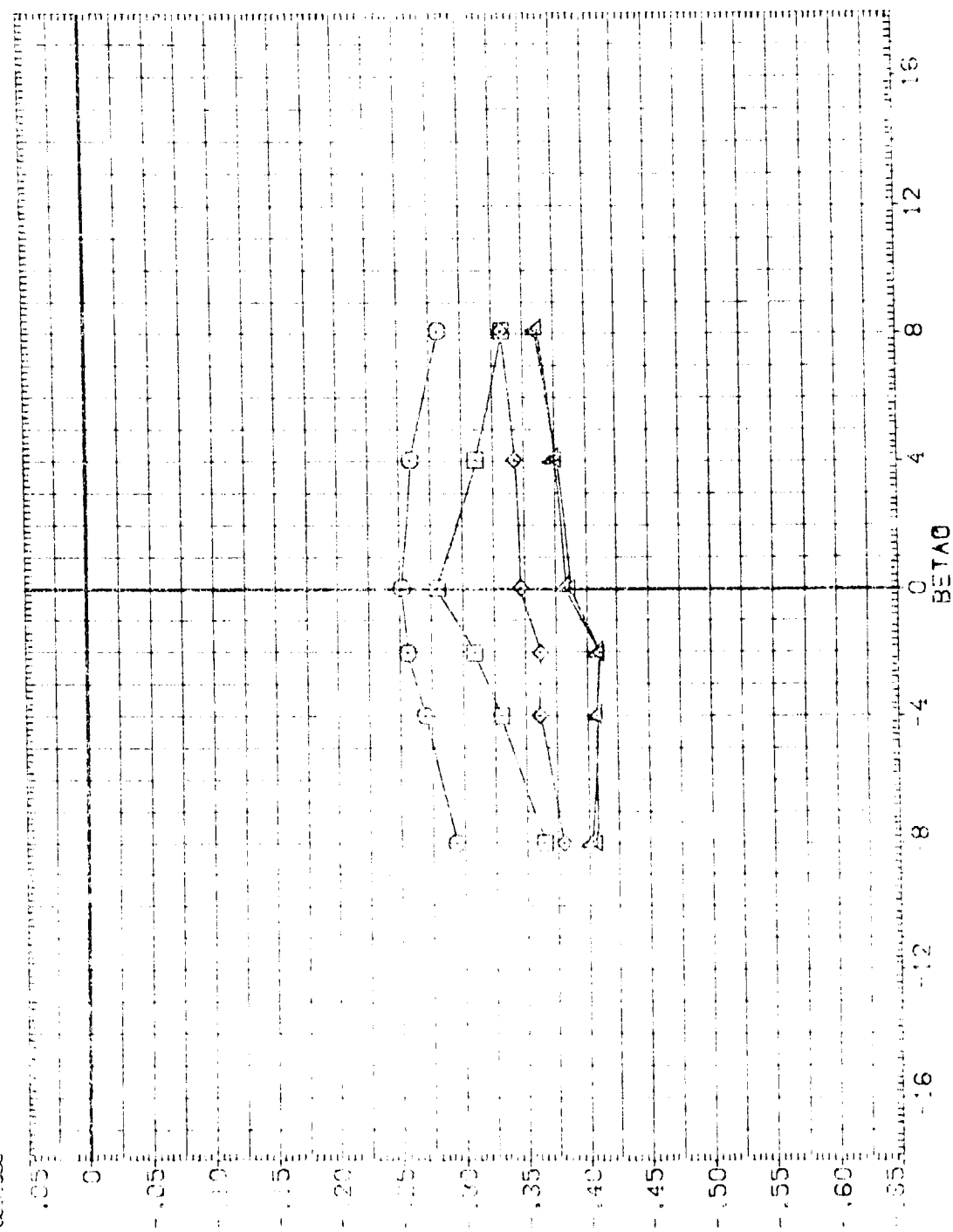
SYMBOL	TAP NO	ALPHA	PARAMETRIC VALUES
○	804.000	.000	MACH
		4.300	ELEVON
			SPDR%
			.000
			.000



EXTERNAL TANK BASE PRESSURES

ARC11-016 1314 01+12+S12N25+A10 ET + SRM BASE (R21Y33)

SYMBOL	TYPE	ALPHA	MACH	PARAMETRIC VALUES
○	501,000	.600	RUDDER	1.250 ELEVON
□	502,000			.000 SPEED
◇	801,000			
△	502,000			
▽	802,000			



EXTERNAL TANK BASE PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ET + SRM BASE (RB1Y33)

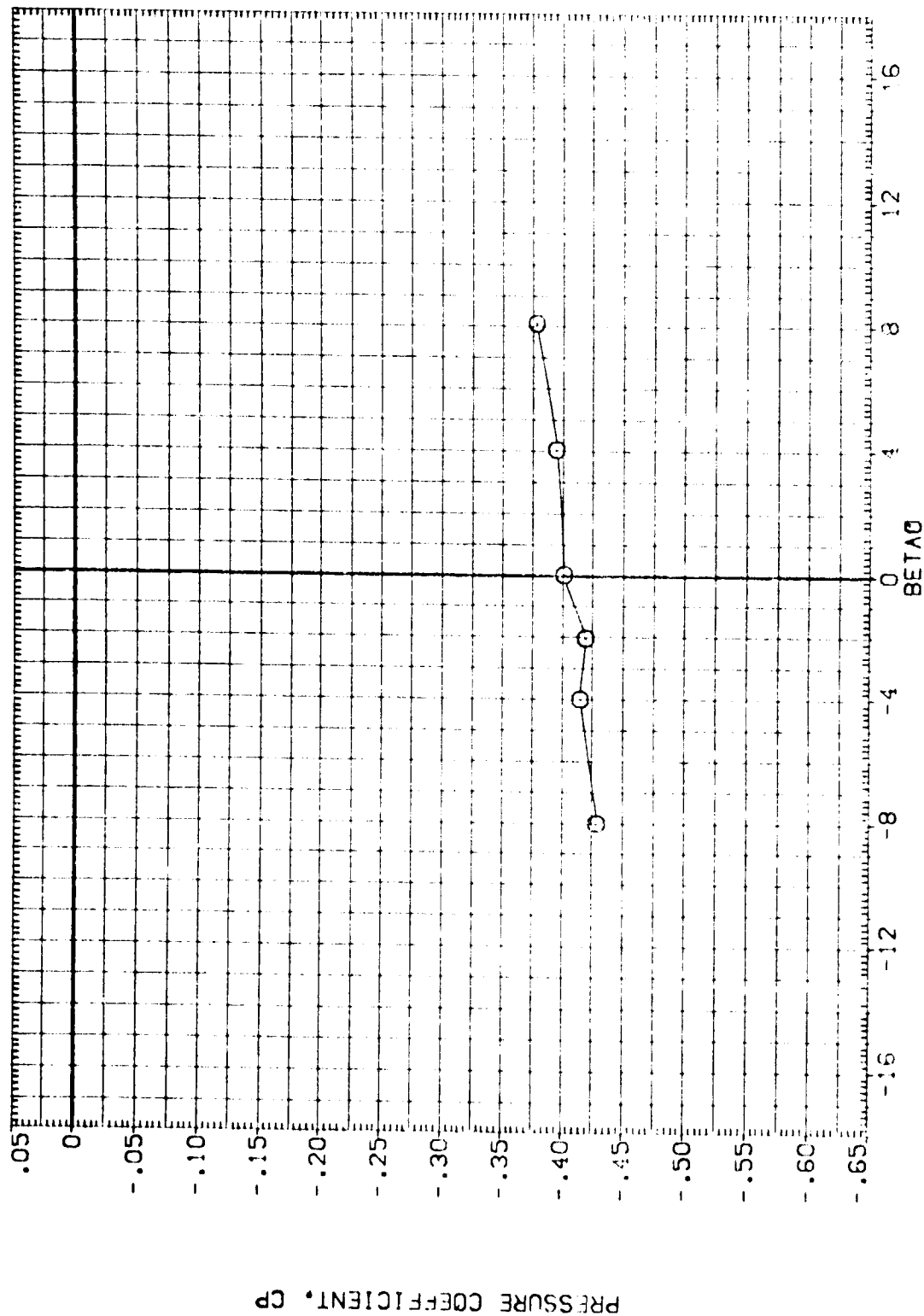
SYMBOL TAP NO

ALPHA

.000

0

PARAMETRIC VALUES
MACH 1.250
RUDDER .000
ELEVON .000
SPDBRK .000



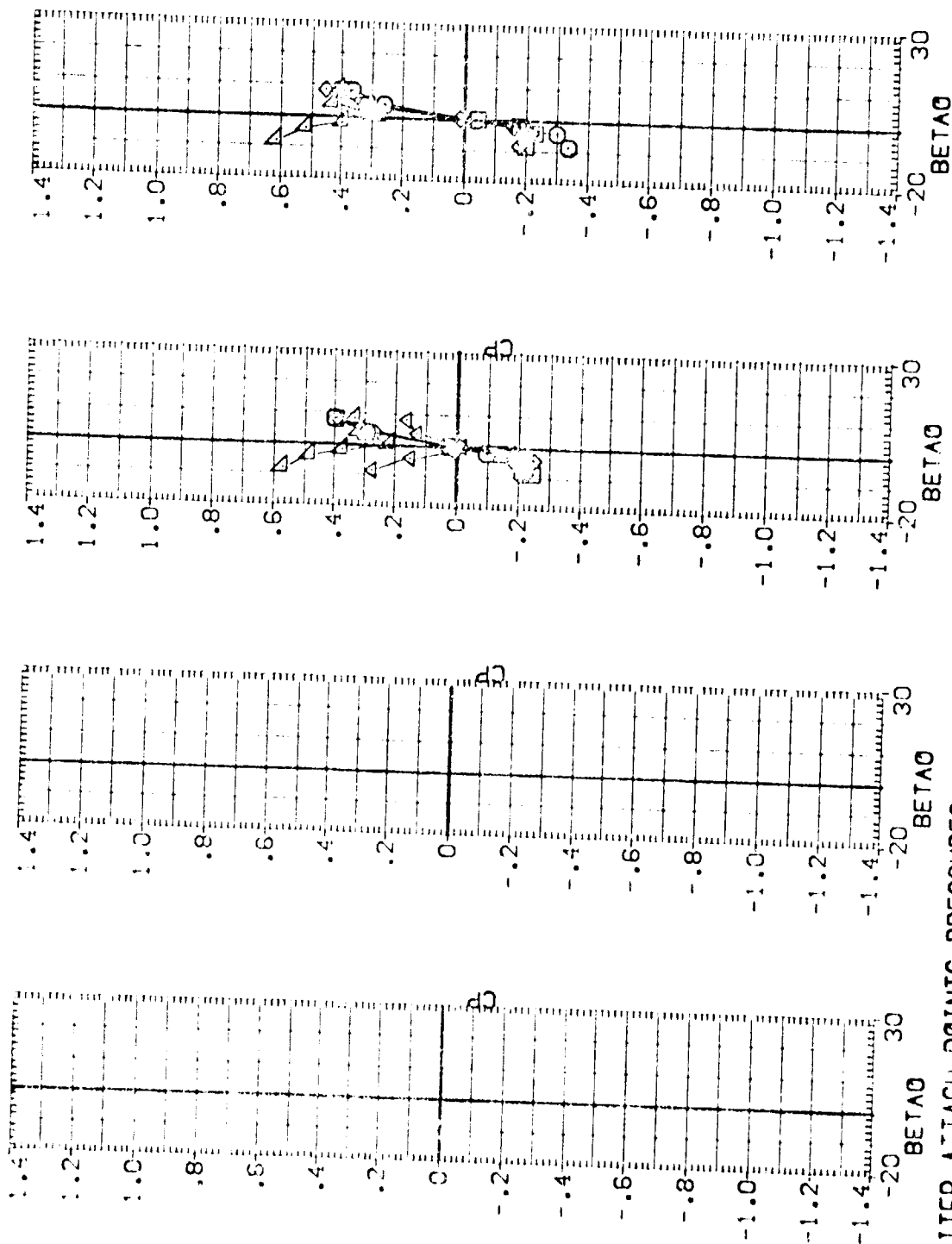
EXTERNAL TANK BASE PRESSURES

ARC:-7:6 [A14 C1+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL

Y/BV	K/LB	ALPHA
-0.277	.126	-8.220
-0.256	.133	
-0.234	.811	
-0.213	.819	
-0.192		

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOON .000



ORBITER ATTACH POINTS PRESSURES

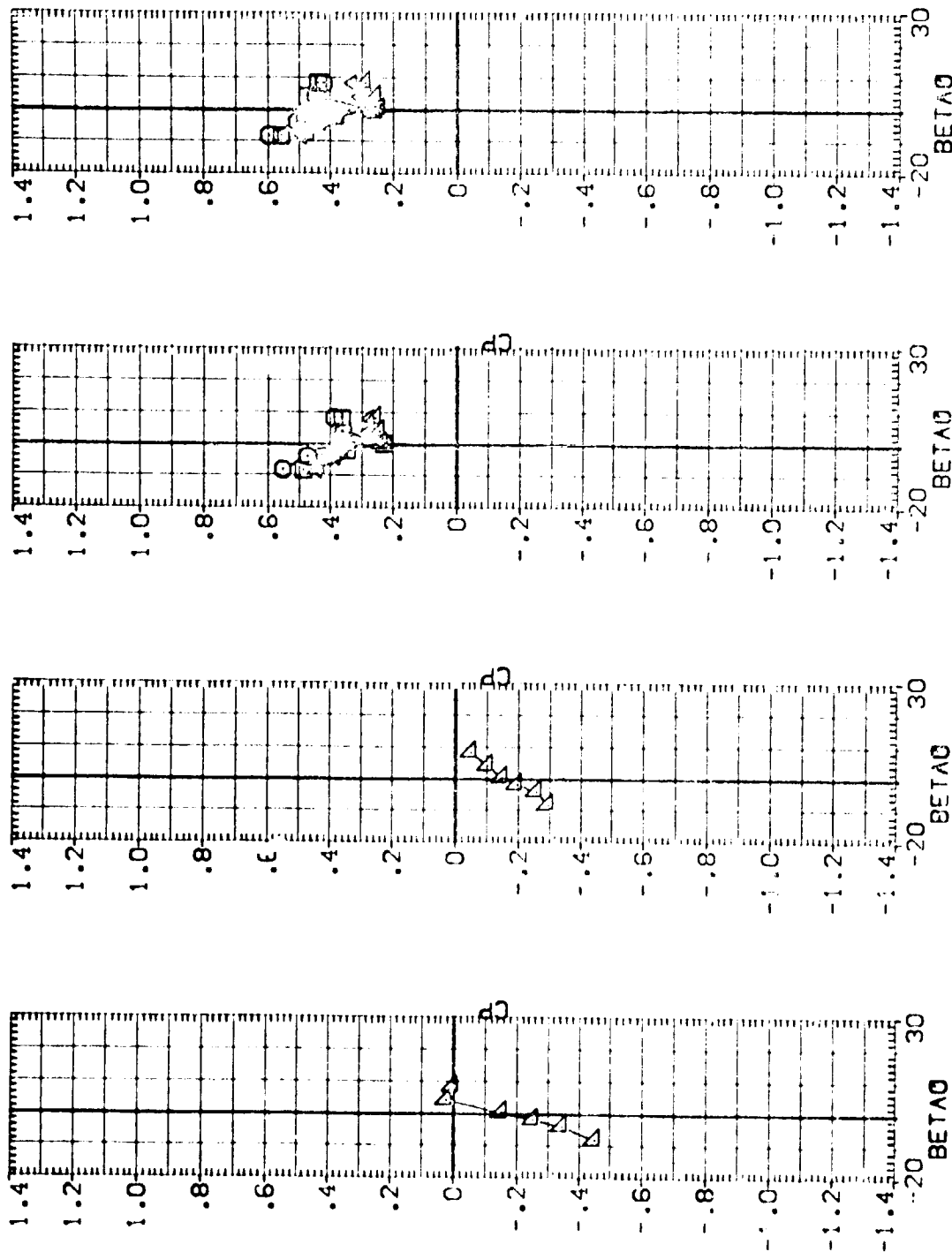
ARC11-716 1A14 01+112+S12N25+AT10 ORB ATTACH PTS(R81133)

SYMBOL □ ◇ △ ▽

V/BV X/LB ALPHA0
 -.170 .126 -8.220
 -.149 .133
 -.107 .811
 -.085 .819
 -.054

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

MACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

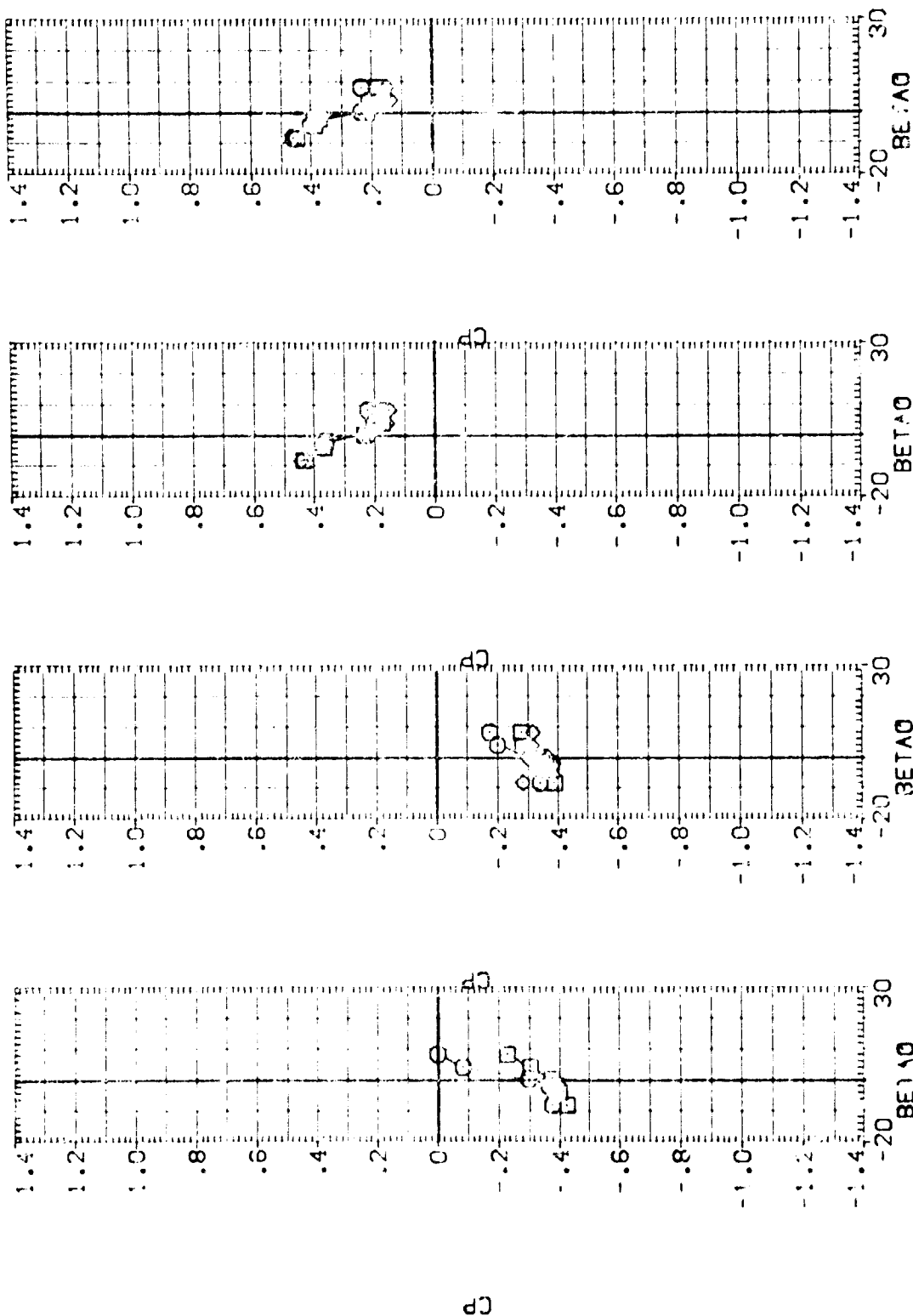
ARC11-718 1A14 01+112+S12N25+AT10 ORB ATTACH PTS(091133)

SYMBOL
□ □ □

Y/BV K/LB ALPHA
-0.013 .126 -8.220
-0.021 .133
.000 .811 .819

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOBRK .000

MACH
RUDDER



ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12-S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL

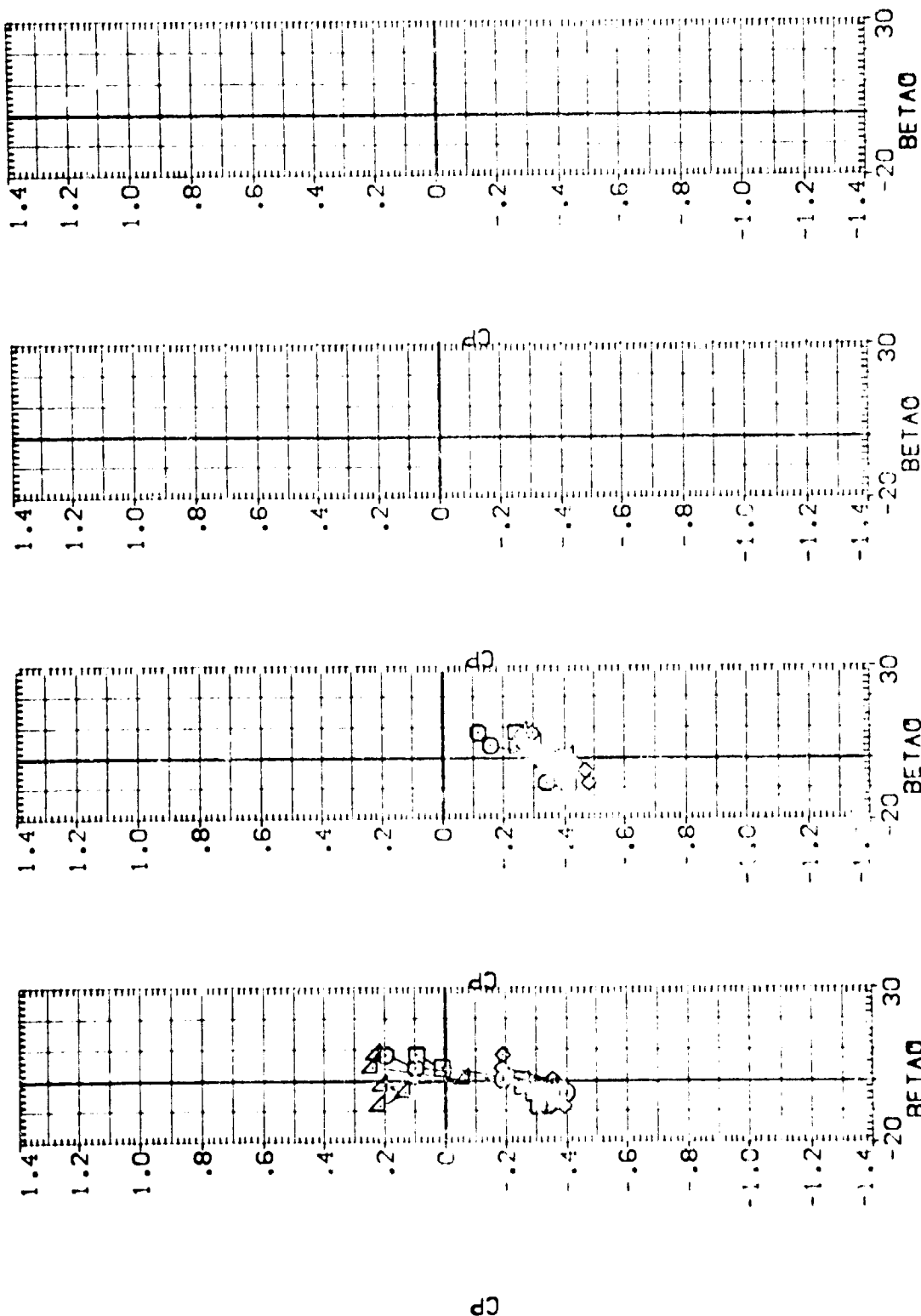
□ □ ◇ △

Y/BV X/LB ALPHA3

-.277 .827 -8.220
-.256 .805
-.234 .850
-.213 .858
-.192

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOILER

MACH
RUDDER



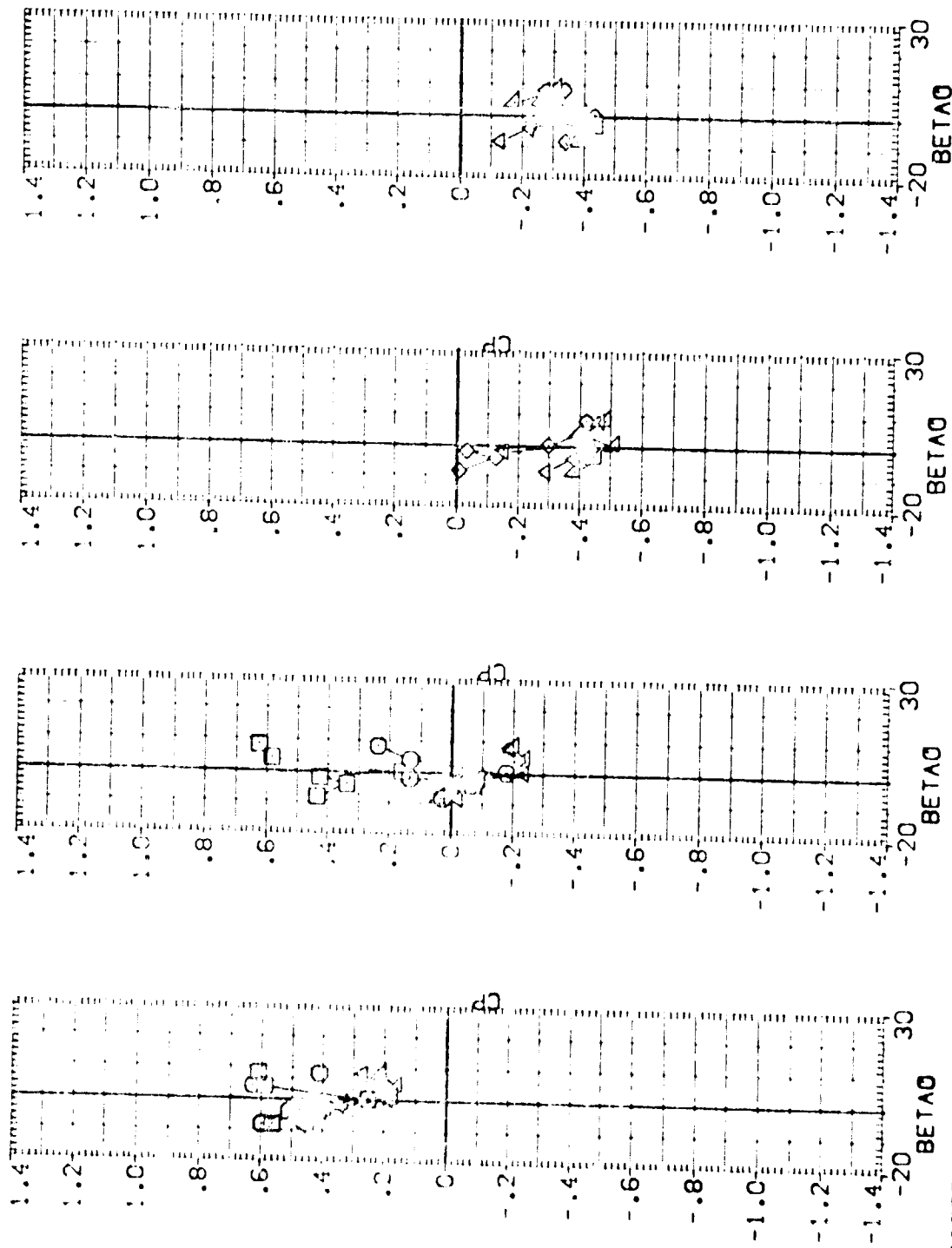
ORBITER ATTACH POINTS PRESSURES

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OF POOR QUALITY

ARC11 T16 1A14 C1+T12+S12N25+AT10 CR8 ATTACH PTS(RB1133)

SYMBOL	Y/BV	X/LB	ALP/AC	PARAMETRIC VALUES	
				1.25C	ELEVON
○	-.170	.827	-8.720	.000	.000
○	-.149	.835		.000	.000
○	-.137	.850			
○	-.085	.858			
○	-.064				

MACH
RUDDER



ORBITER ATTACH POINTS PRESSURES

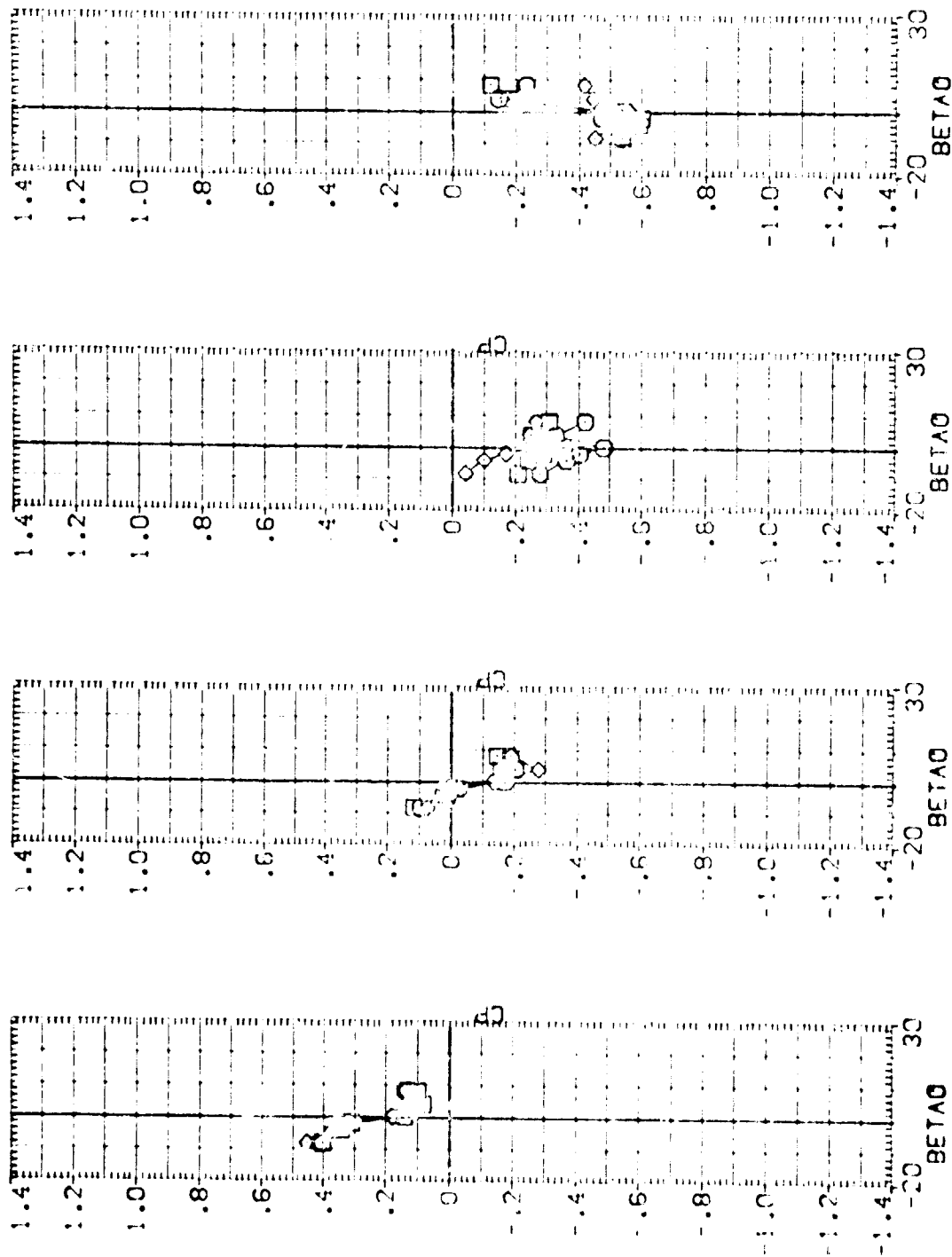
ARC:-716 1A:4 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL

Y/BV X/LB ALPHA0
 -.043 .927 -8.220
 -.021 .805
 .000 .850 .858

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

MACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

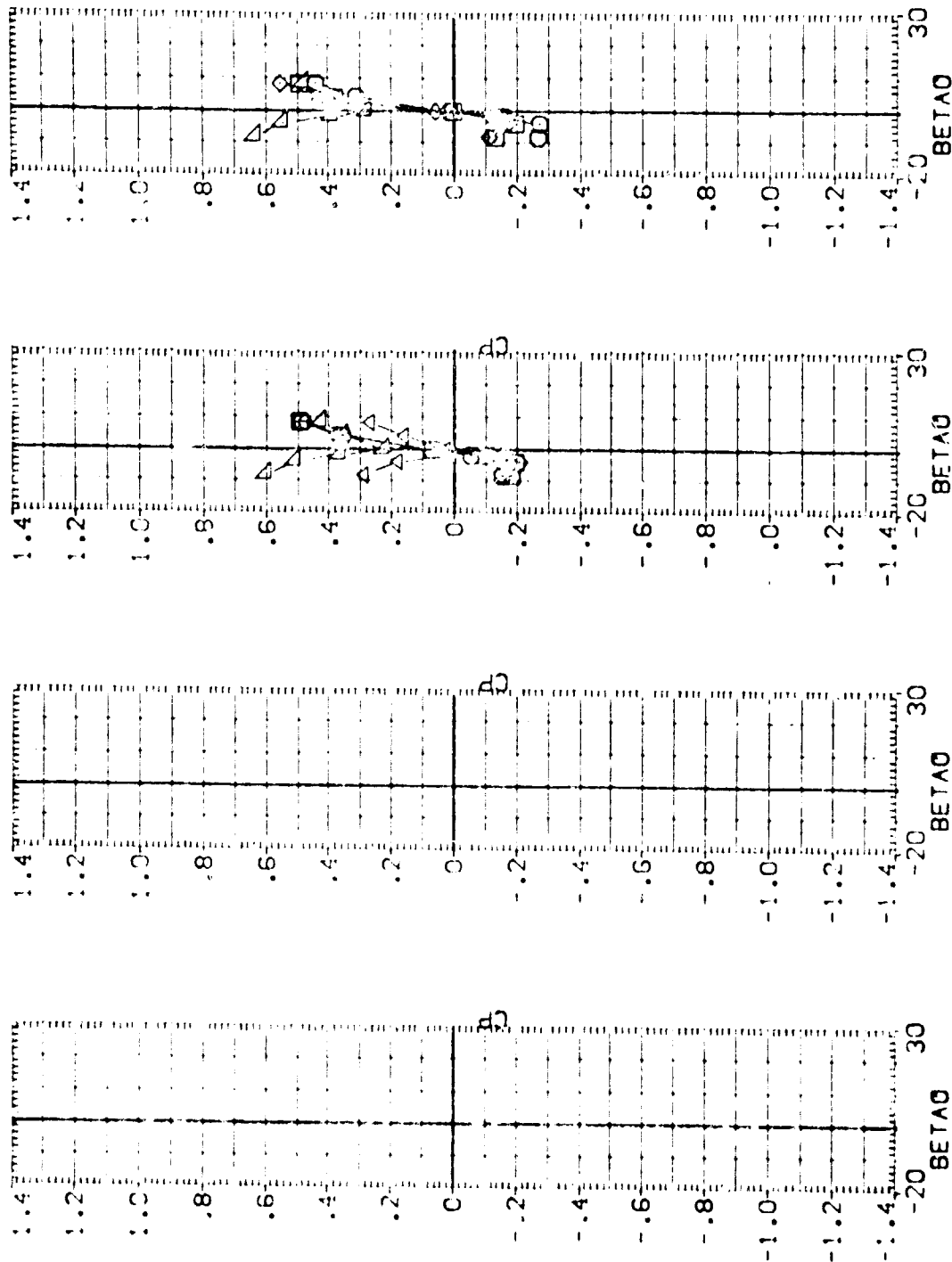
ARC11-016 J44 01712-S12A25-AT10 ORB ATTACH PTS (RB1133)

SYN00

Y/BV X/Z/B A/B/AO
 -1.277 1.126 -1.700
 -1.256 1.133
 -1.234 .011
 -1.213 .819
 -1.192

MACH
 RUDDER

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 STORK .000



ORBITER ATTACH POINTS PRESSURES

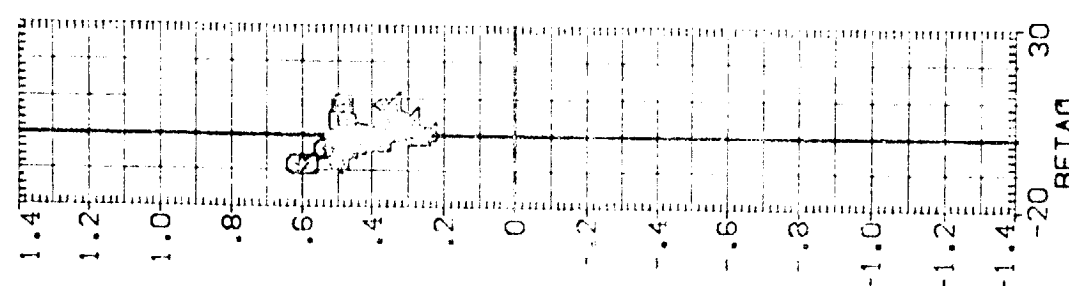
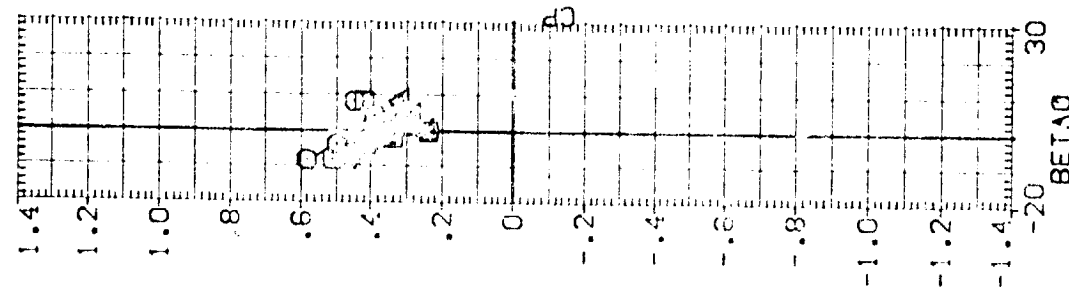
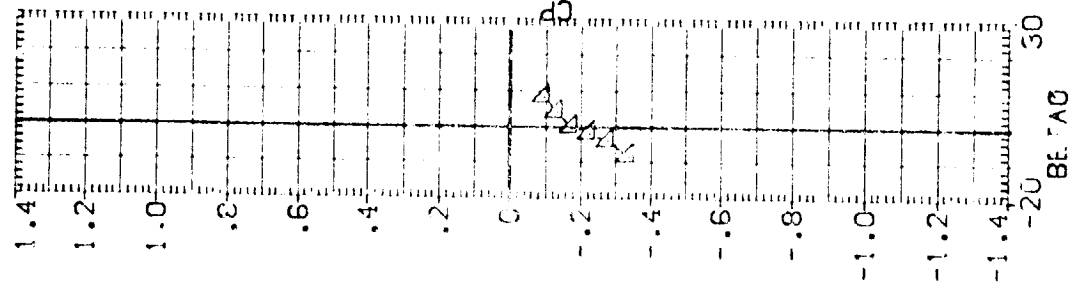
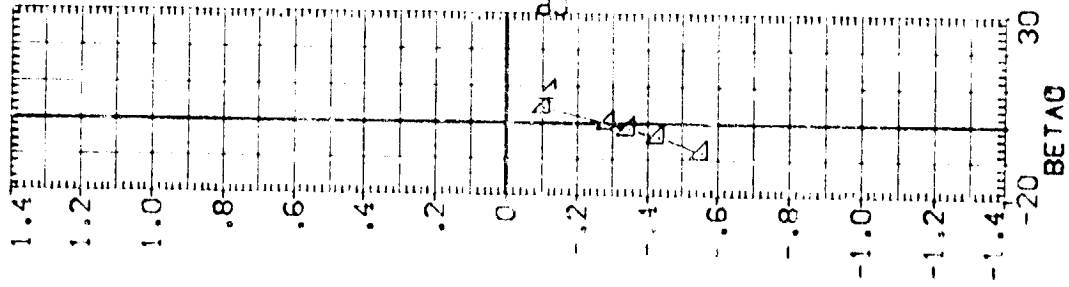
ARC11-716 I/14 01+112+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL
 O O O 4.1

Y/BV X/LB ALPHA
 -.170 .126 -4.200
 -.149 .133
 -.107 .811
 -.085 .819
 -.064

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOON .000

MACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

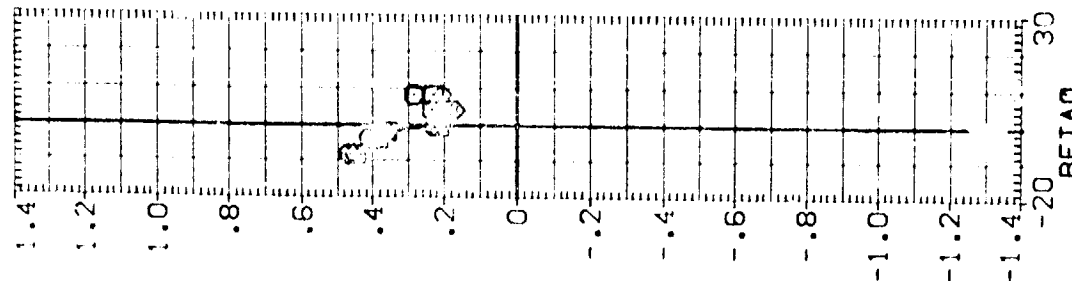
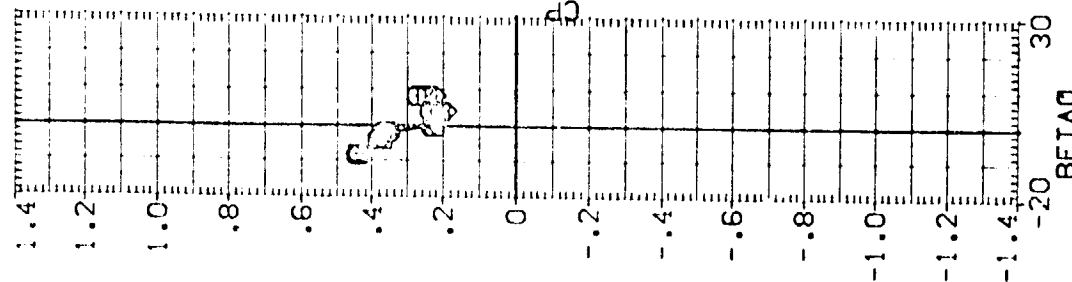
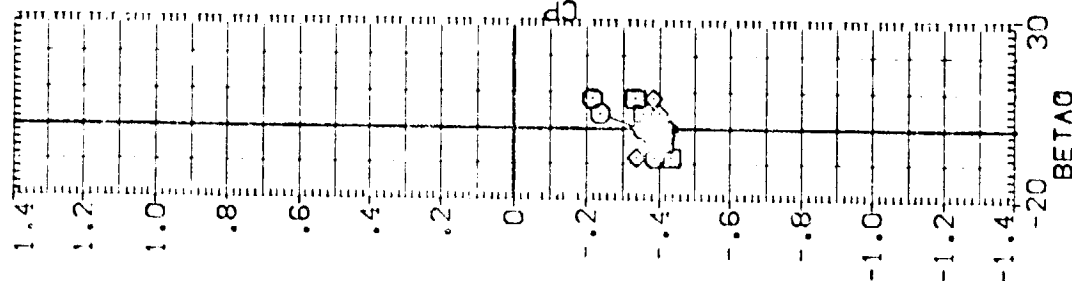
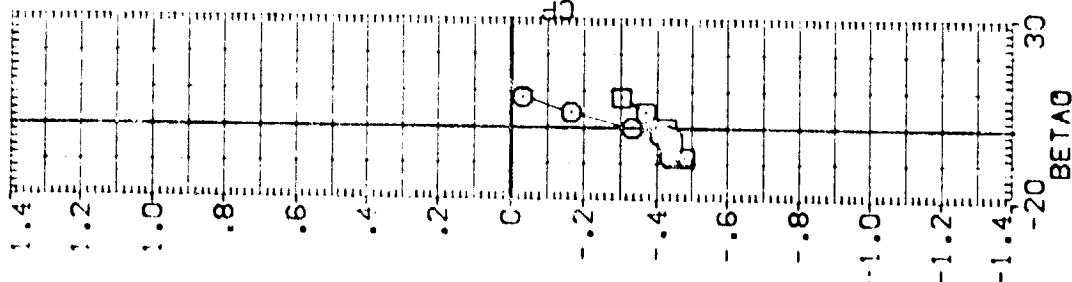
ARC11-718 1A14 01-12+S12N25+AT10 ORB ATTACH PTS (13:133)

SYMBOL

Y/BV .126
 .043 .130
 .021 .811
 .000 .819

PARAMETRIC VALUES

MACH .000
 RUDDER .000
 ELEVON .000
 SPOON .000



ORBITER ATTACH POINTS PRESSURES

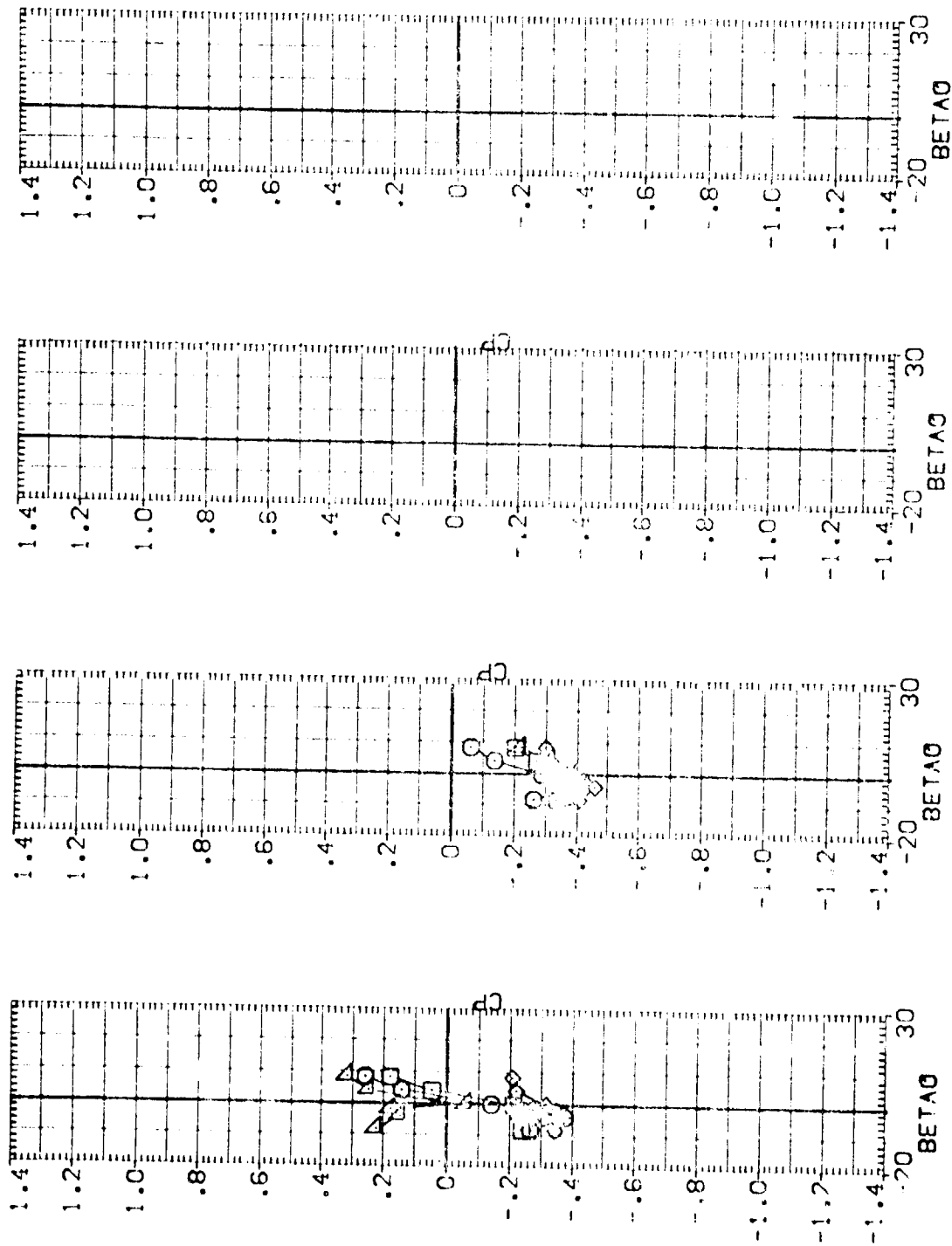
ARC11-716 1A14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL

Y/BV	X/LB	ALPHA0
-.277	.827	-4.200
-.256	.805	
-.234	.850	
-.213	.858	
-.192		

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOOR .000

MACH
RUDDER



ORBITER ATTACH POINTS PRESSURES

ARC11-16 1A14 01+112+S12N25+AT10 OR8 ATTACH PTS(RB1133)

SYMBOL

Y/BV

X/LB

ALPHA

MACH

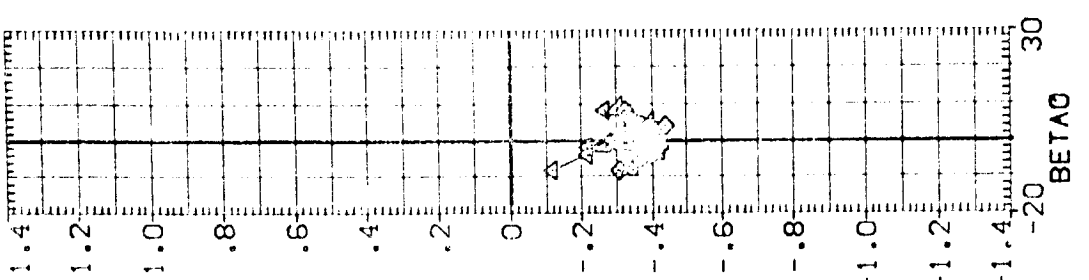
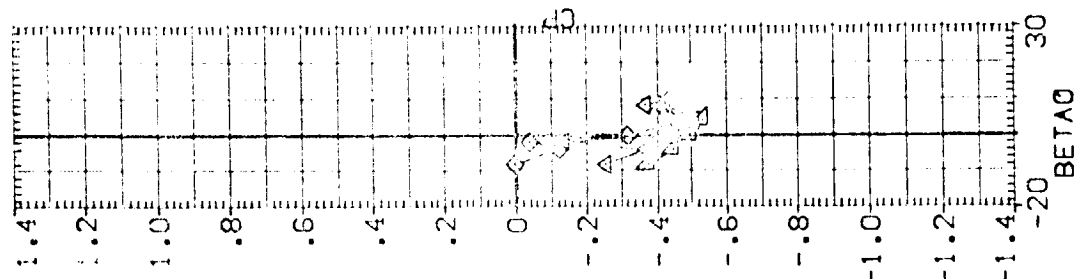
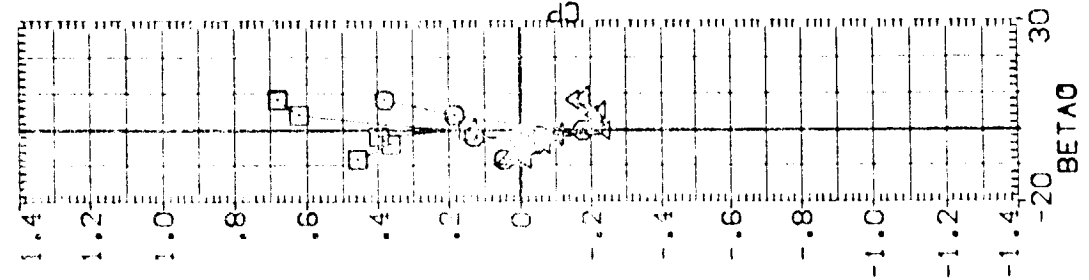
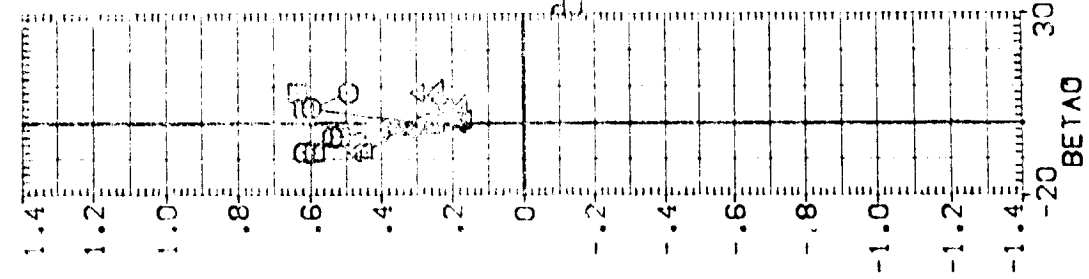
PARAMETRIC VALUES

ELEVON

SPDRK

.000

.000



ORBITER ATTACH POINTS PRESSURES

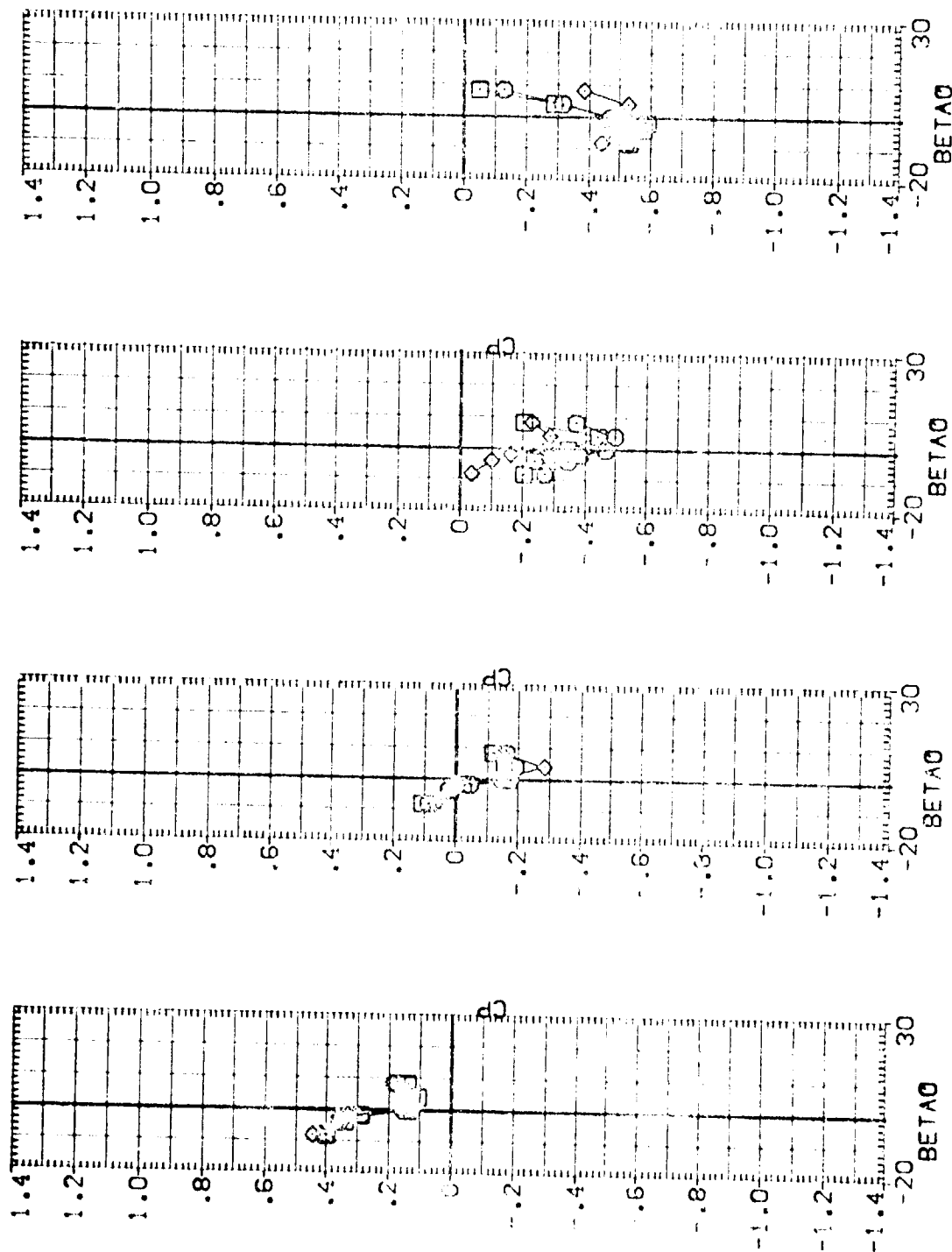
ARC11-716 1A14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB: .33)

SYMBOL

Y/BV X/LB ALPHA0
 -.043 .827 -4.200
 -.021 .835
 .000 .850
 .858

PARAMETRIC VALUES

MACH RUDDER
 1.250 ELEVON .000
 .000 SPEEDBRK .000



ORBITER ATTACH POINTS PRESSURES

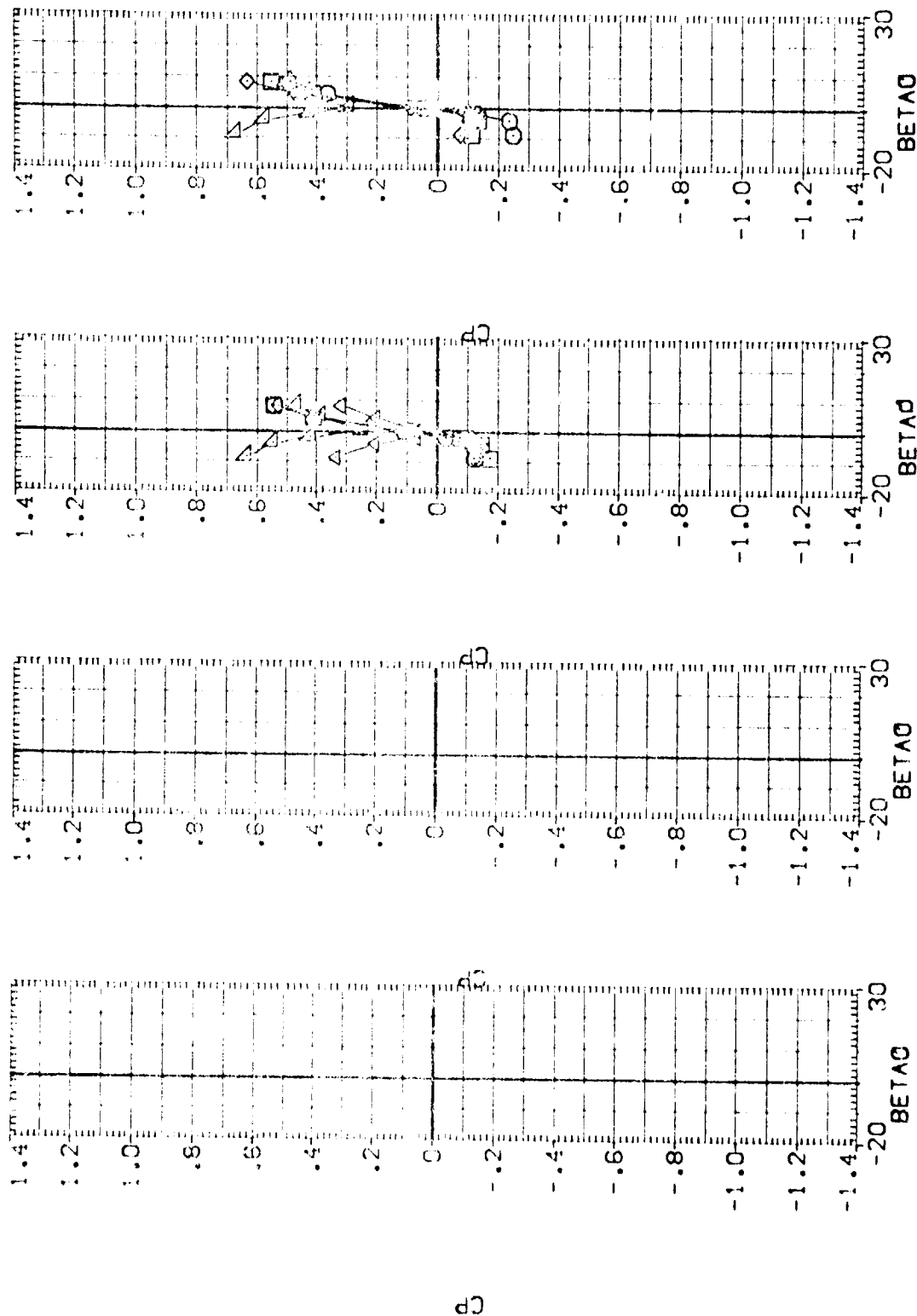
ARC11-716 1A14 01+T12+S12N25+AT1C OR3 ATTACH PTS(RB1133)

SYMBOL

Y/BV	X/LB	ALPHA
-.277	.126	-.760
-.256	.133	
-.234	.811	
-.213	.819	
-.192		

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOILER .000

MACH
RUDDER



ORBITER ATTACH POINTS PRESSURES

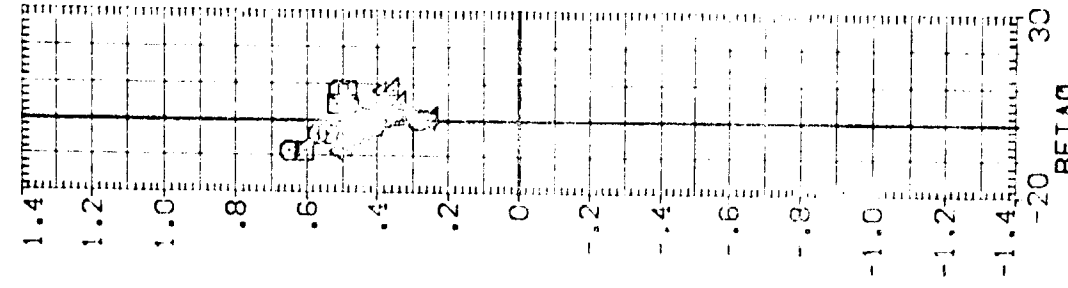
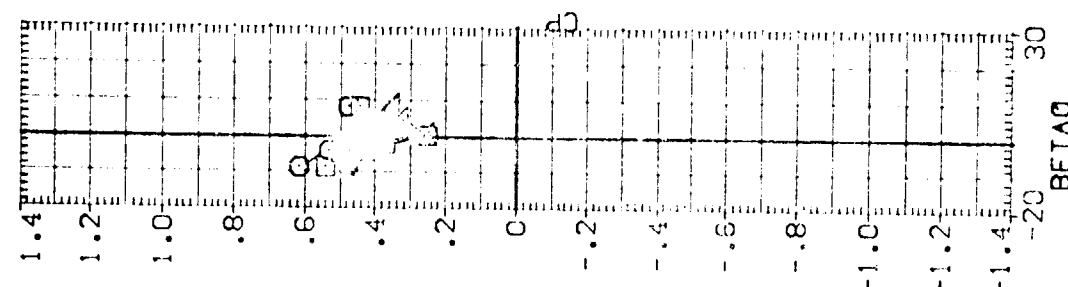
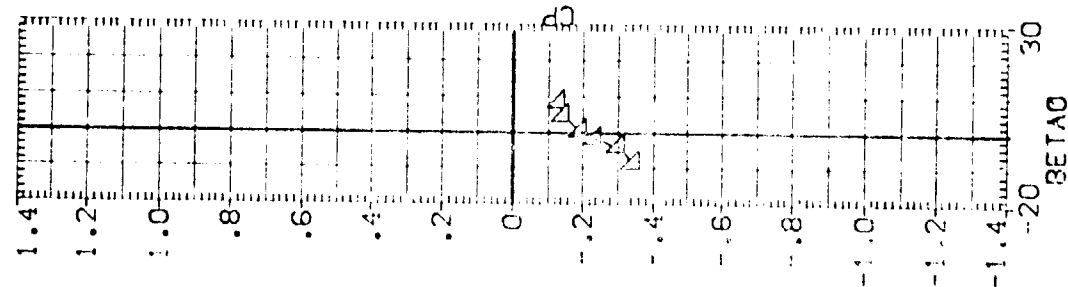
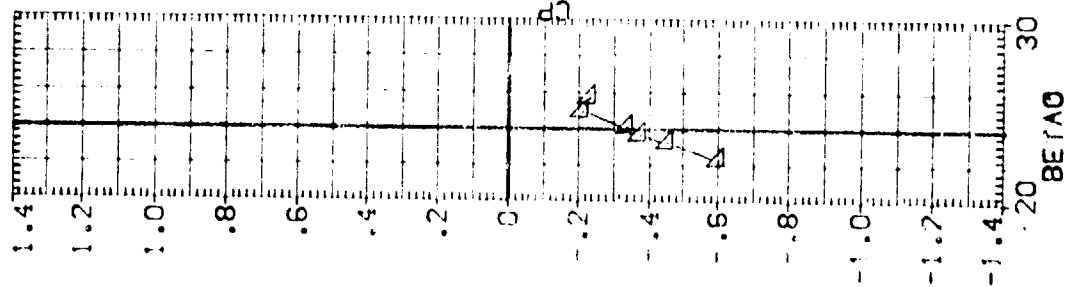
ARC11-716 IA14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL
 ○ □ ◇ △

V/8V X/LB ALPHA0
 -.170 .126 -.760
 -.149 .133
 -.107 .811
 -.085 .819
 -.064

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOORK .000

MACH
 RUDDER



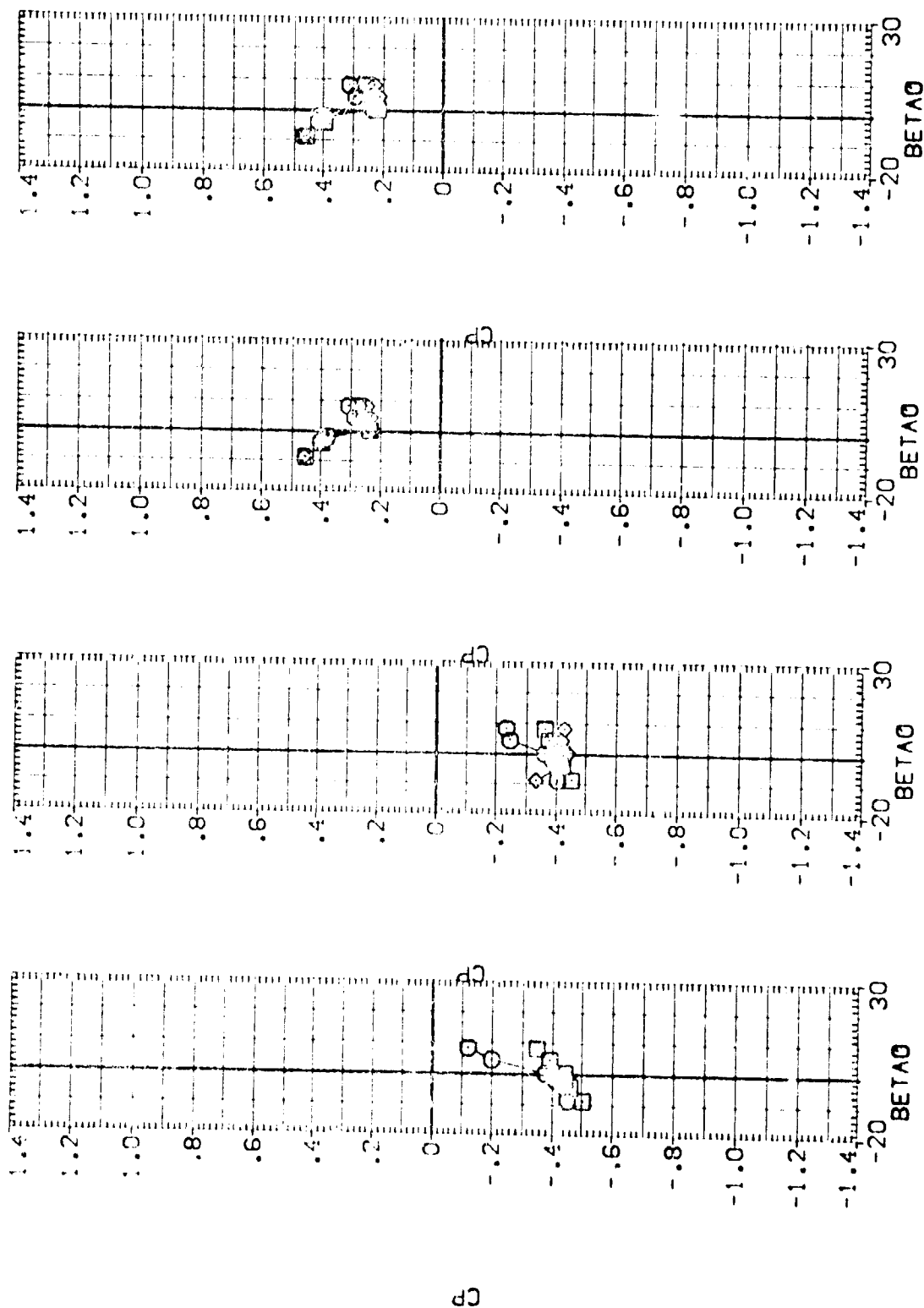
ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+12+S12N25+AT10 ORB ATTACH PTS(RB11C3)

SYMBOL

Y/BV X/LB ALPAC
 -.043 .126 -.750
 -.021 .133
 .000 .811 .819

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000
 MACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25-AT10 ORB ATTACH PTS(RB1133)

SYMBOL

□ □ ◇ 44

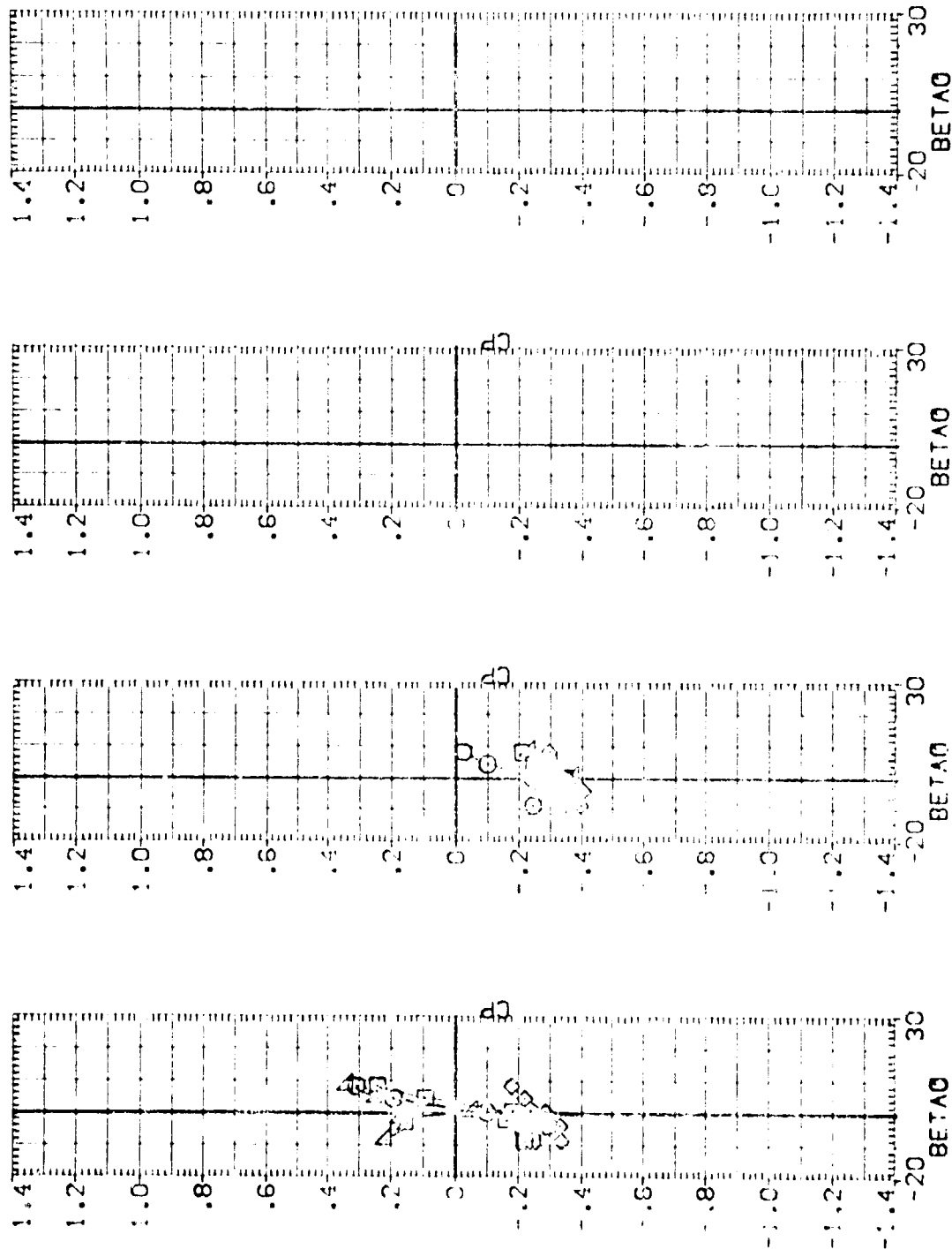
Y/BV X/LB ALPHA0

-.277 .877 -.783
-.256 .835
-.234 .850
-.213 .858
-.192

PARAMETRIC VALUES

1.250 ELEVON .000
.000 SPOBRK .000

MACH
RUDDER



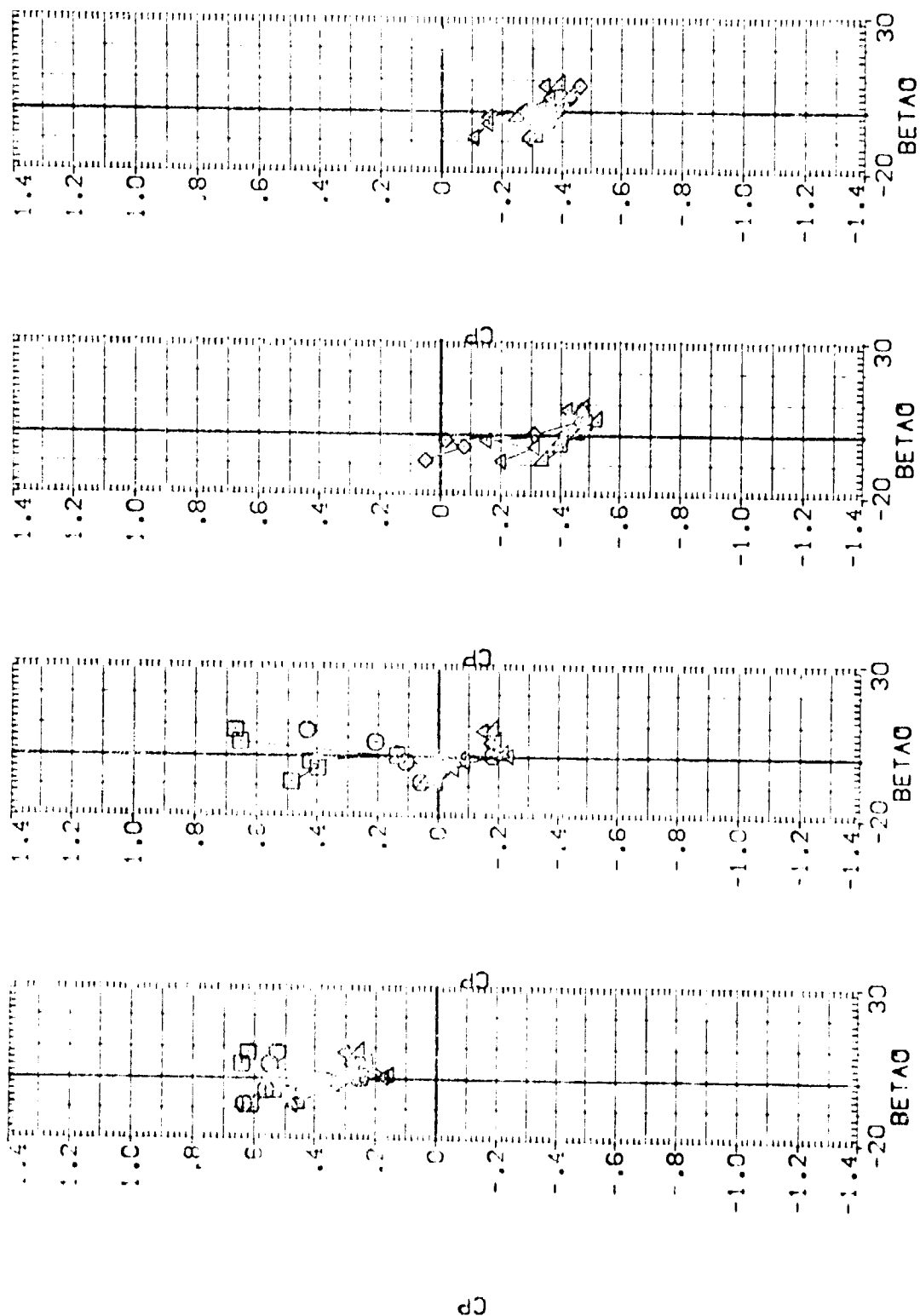
ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 0R8 ATTACH PTS(RP1133)

Symbol

Y/BV	Y/LB	ALP+AD
-.170	.827	-.760
-.149	.805	
-.107	.850	
-.065	.838	
-.064		

PARAMETRIC VALUES		
1.250	ELEVON	.000
.000	SPDBRK	.000
	MACH	
	RUDDER	



ORBITER ATTACH POINTS PRESSURES

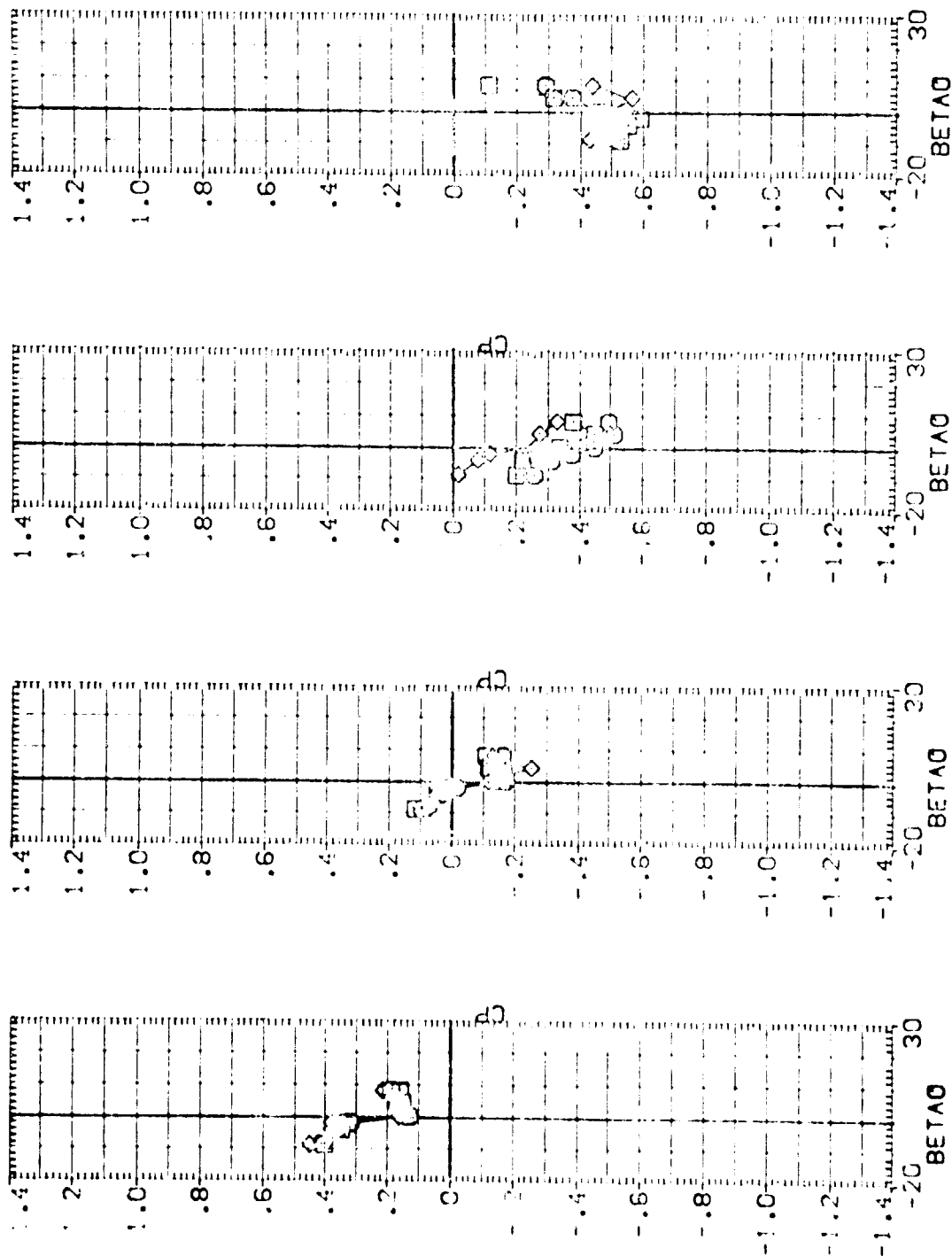
ARC11-716 1A14 01+T12+S12N25+A110 ORB ATTACH PTS(RB1133)

SYMBOL

V/BV X/LB ALPHA0
 -.043 .827 -.730
 -.021 .805
 .000 .850 .858

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOILER .000

HACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

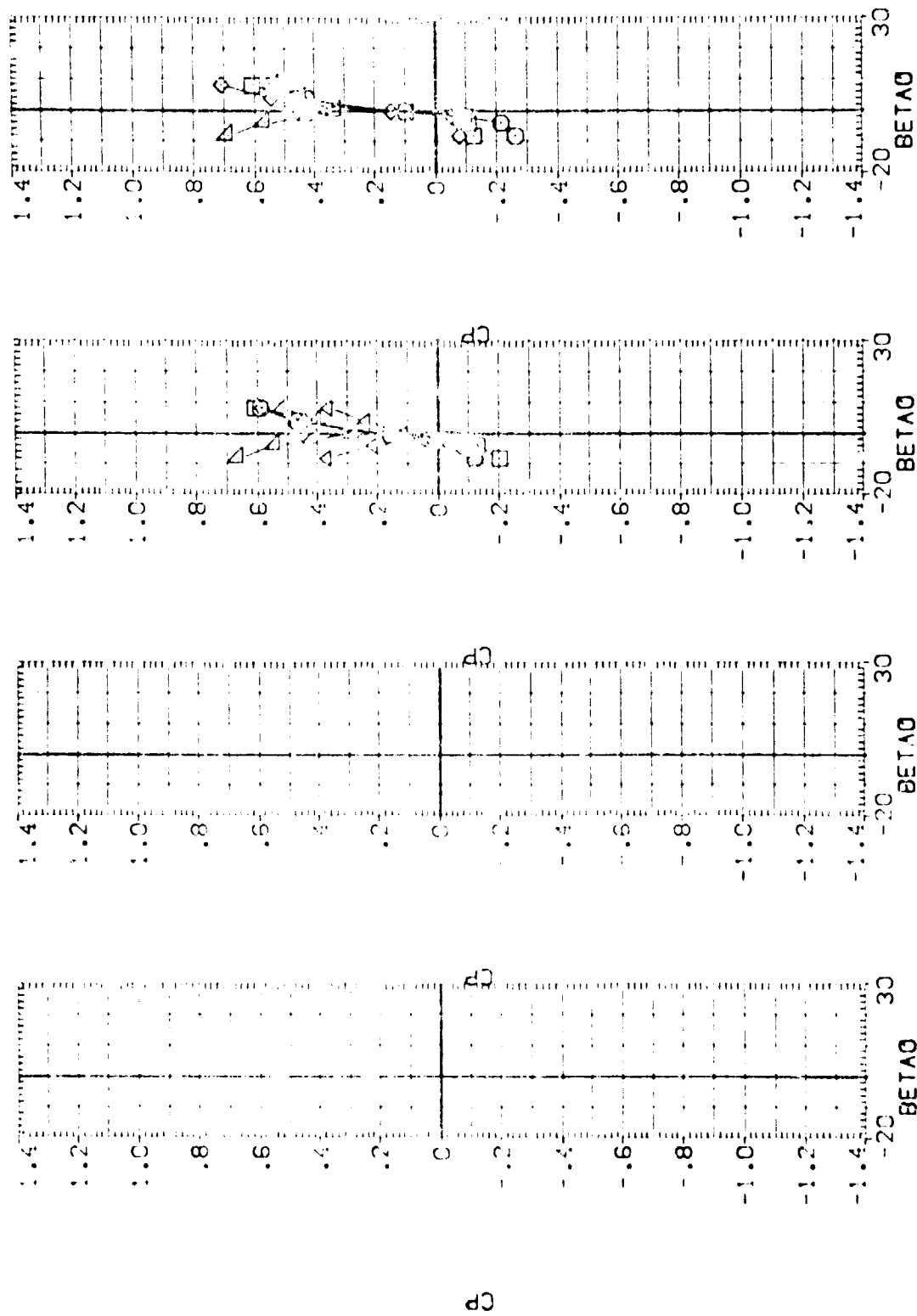
APC11-716 1A14 01+T12+S12N25+AT10 GR8 ATTACH P'S(RB1133)

SYMBOL

Y/BN X/LB ALPHA
 -1.277 .125 4.300
 -1.256 .133
 -1.234 .811
 -1.213 .819
 -1.192

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

MACH
 RUDDER



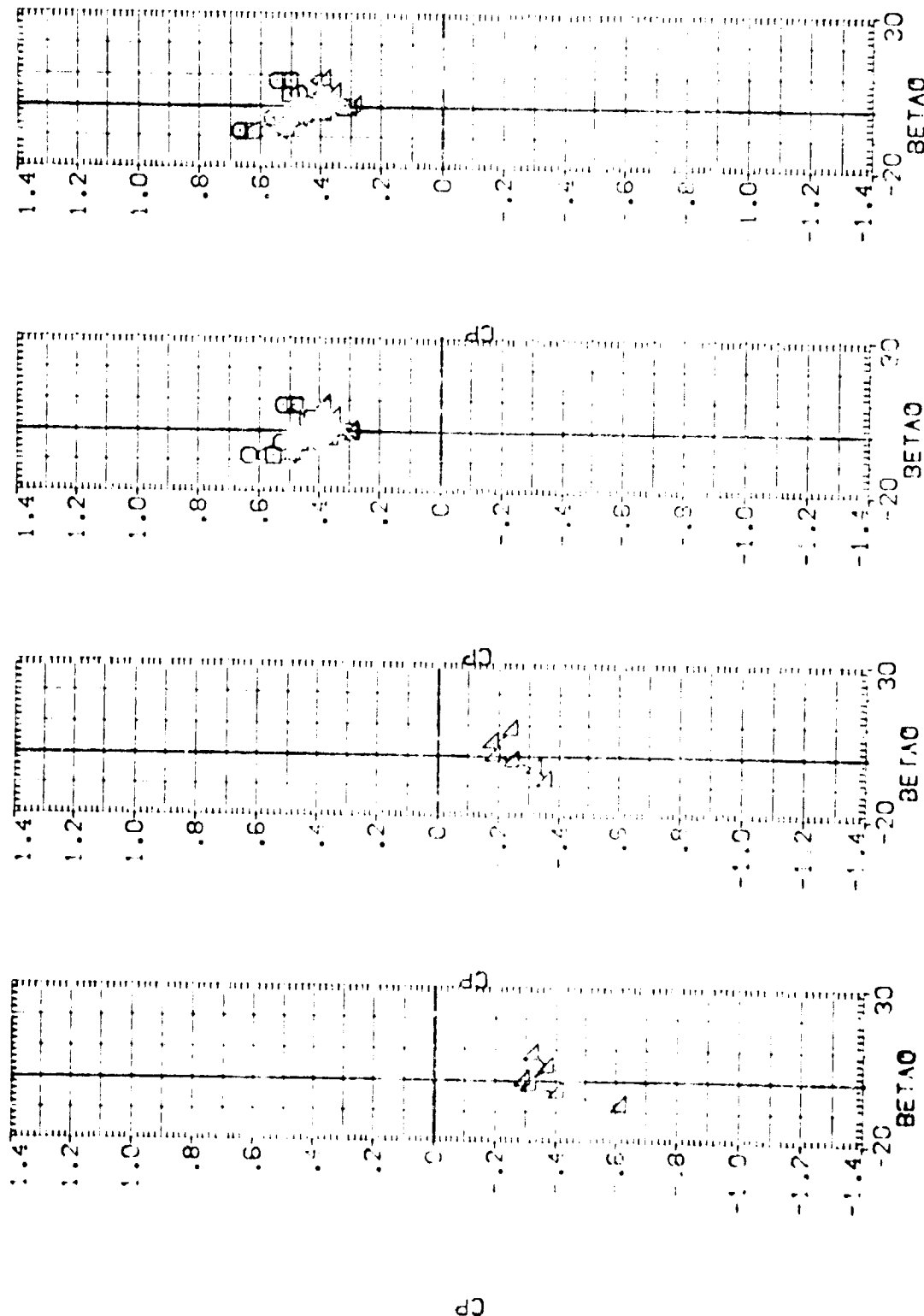
ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 CRB ATTACH PIS(RB1133)

SYMBOL

Y/BV X/LB ALPHA0
 -.170 .126 4.300
 -.149 .133
 -.107 .811
 -.085 .819
 -.064

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOILER .000



ORBITER ATTACH POINTS PRESSURES

ARC11-710 1A14 01+112+S12N25+A110 ORB ATTACH PTS(RB1133)

SYMBOL

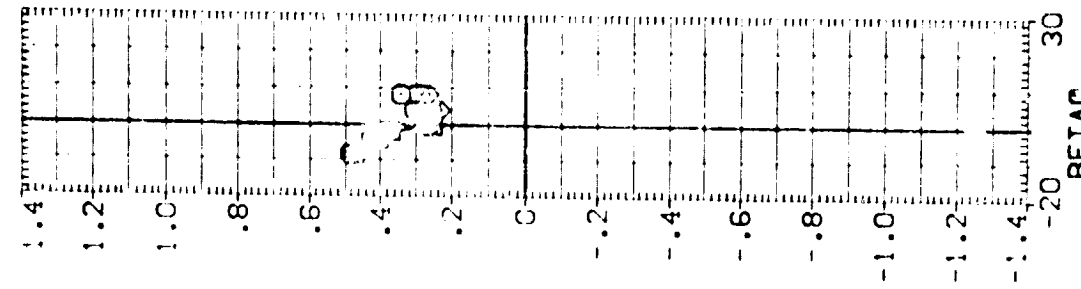
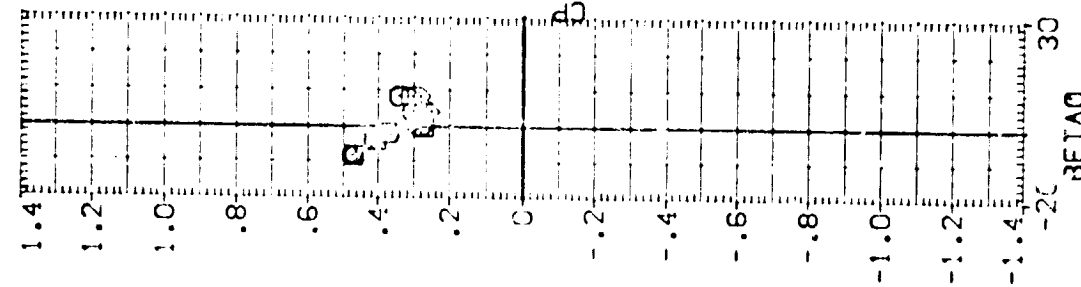
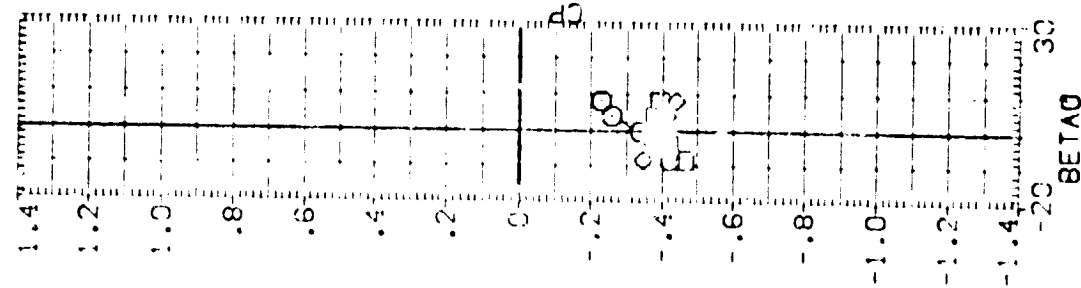
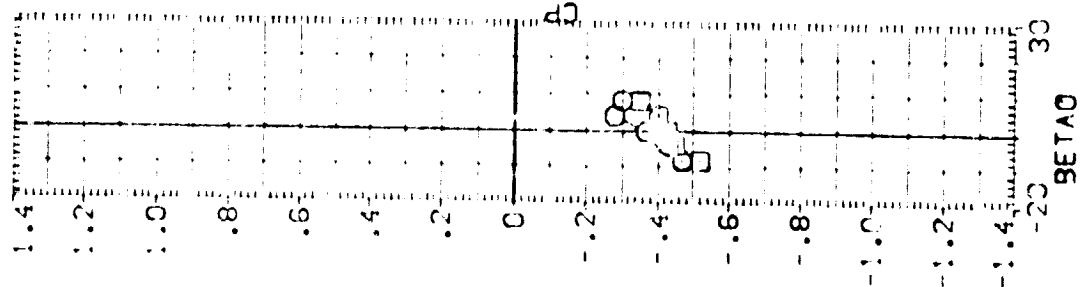
Y/BV X/LB ALP/AD

-0.043
-0.021
.000

.126
.130
.811
.819

MACH
RUDDER

P. METRIC VALUES
1.250 ELEVON .000
.000 SPOORX .000



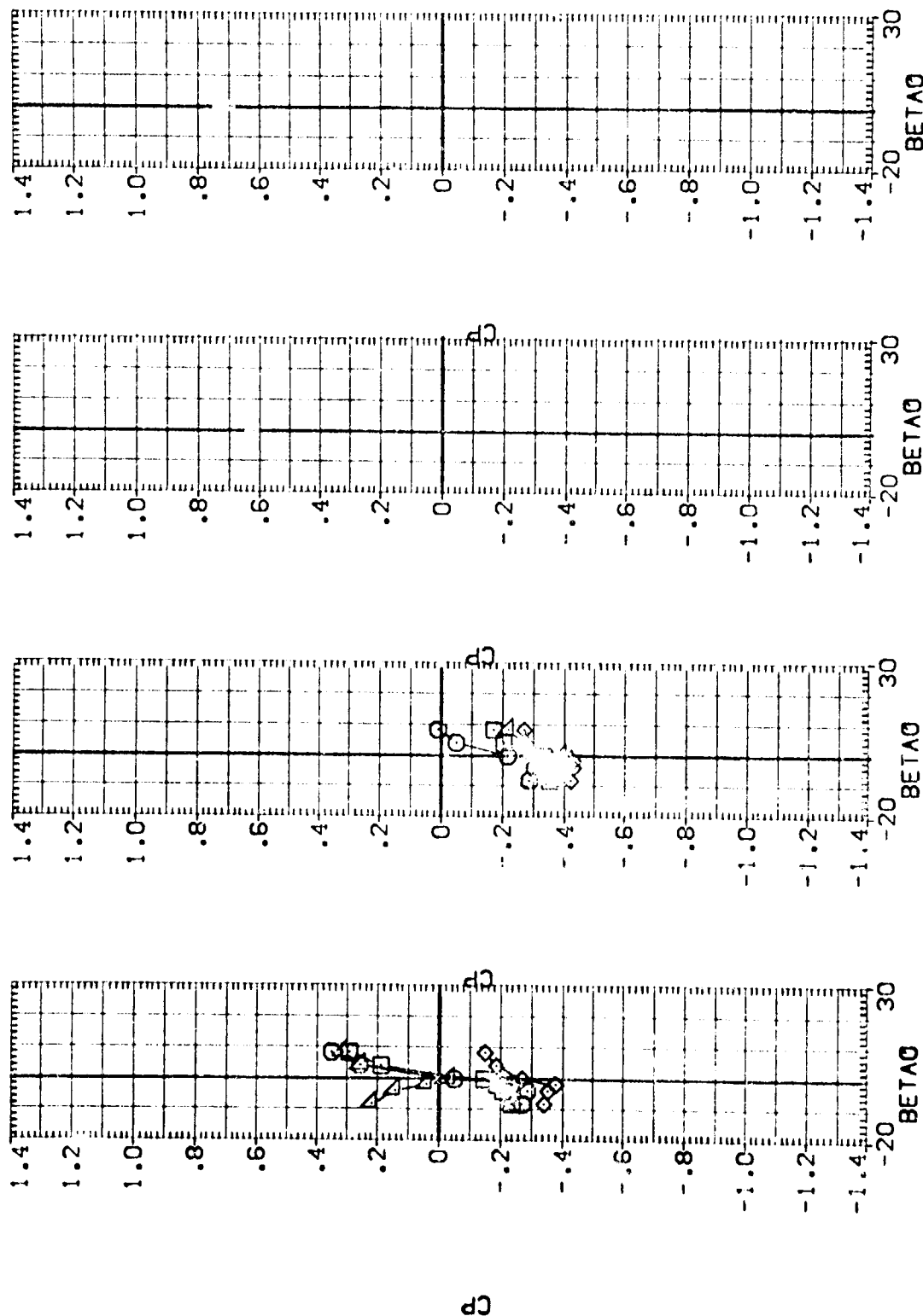
ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL
 ○ □ ◇ △

Y/BV X/LB ALPHA0
 -.277 .827 4.300
 -.256 .835
 -.234 .850
 -.213 .858
 -.192

PARAMETRIC VALUES
 1.250 ELEVYN .000
 .000 SPOBRK .000
 MACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

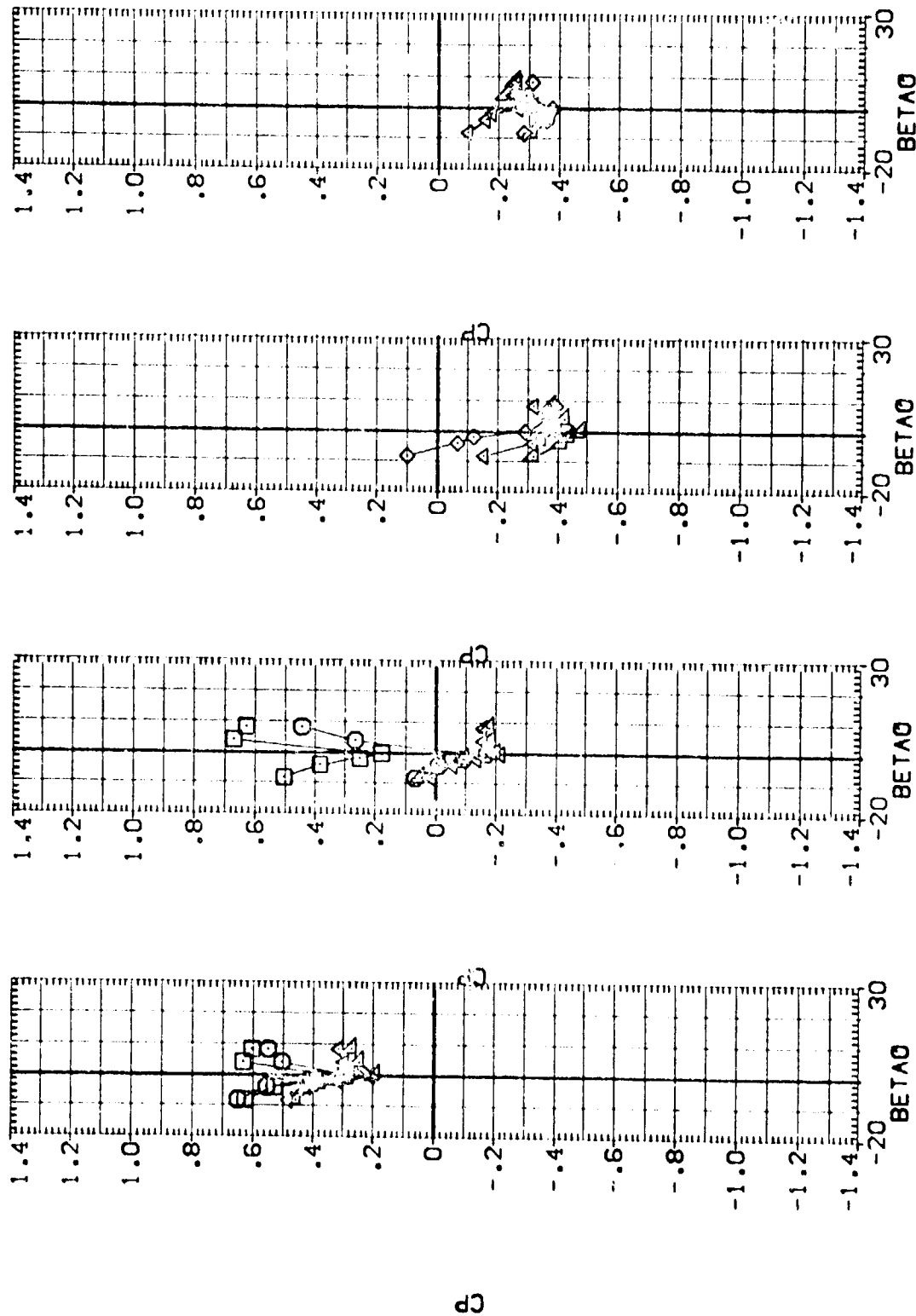
ARC11-716 1A14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL
 ○ □ ◇ △

Y/BV X/LB ALPHA0
 -.170 .827 4.300
 -.149 .835
 -.107 .850
 -.085 .858
 -.064

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

MACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

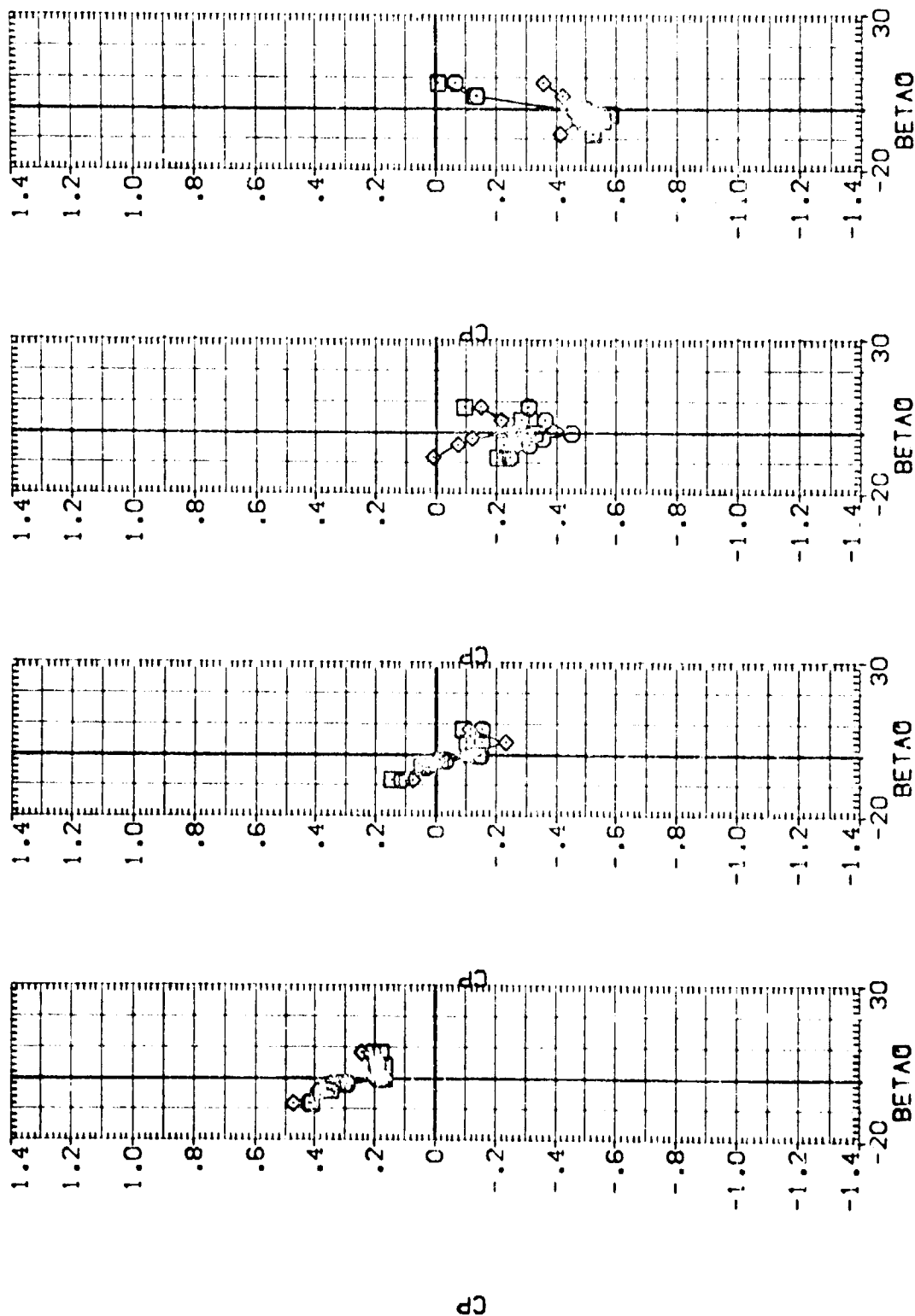
ARC11-716 1A14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL
 ○ □ ◇

Y/BV X/LB ALPHAQ
 -.043 .827 4.300
 -.021 .835
 .000 .850
 .858

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPDRBK .000

MACH
 RUDDER



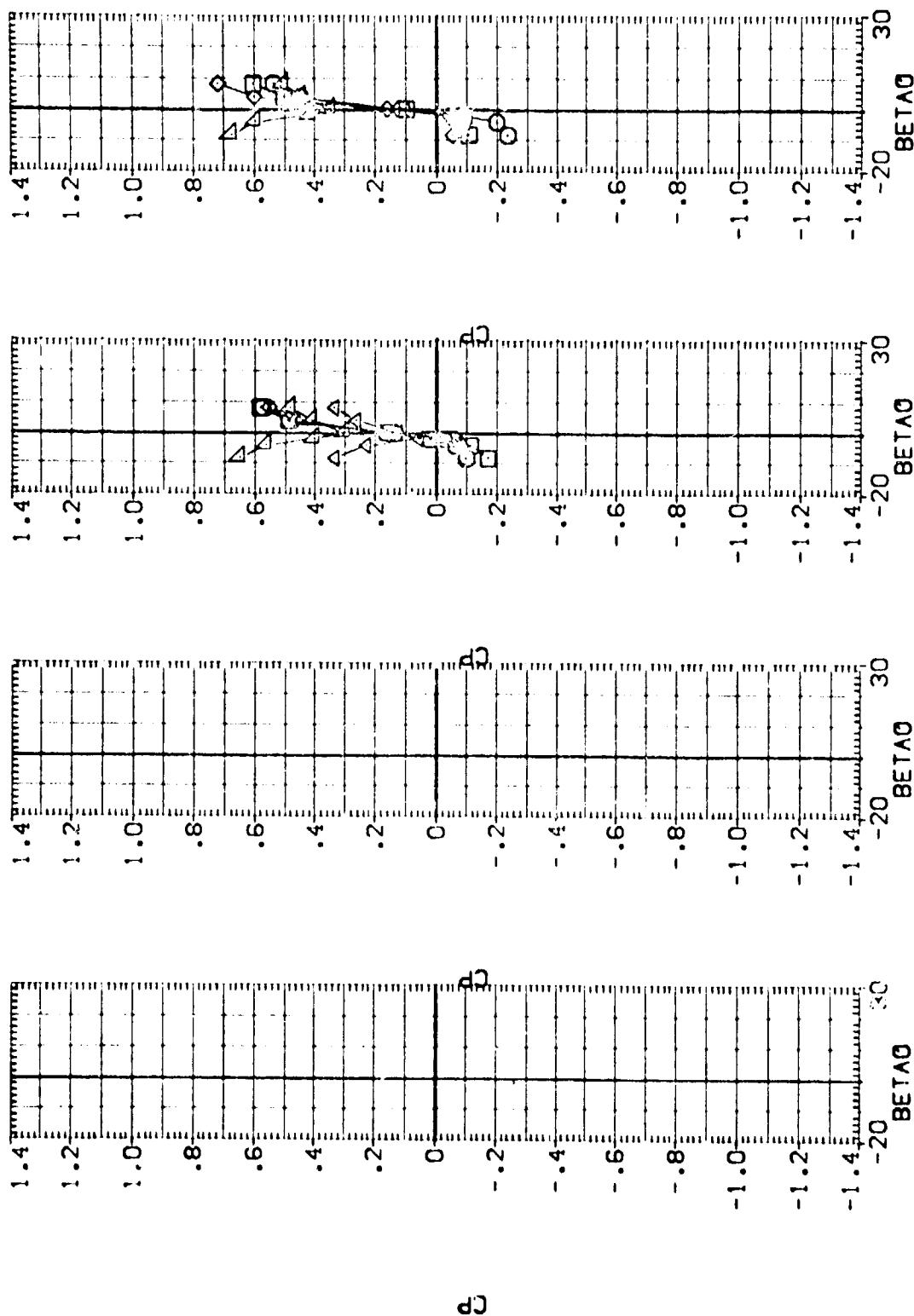
ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL
 O □ △ ◇

Y/BN X/LB ALPHA0
 -.277 .126 7.910
 -.256 .133
 -.234 .811
 -.213 .819
 -.192

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000
 MACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ORB ATTACH PTS(RB1133)

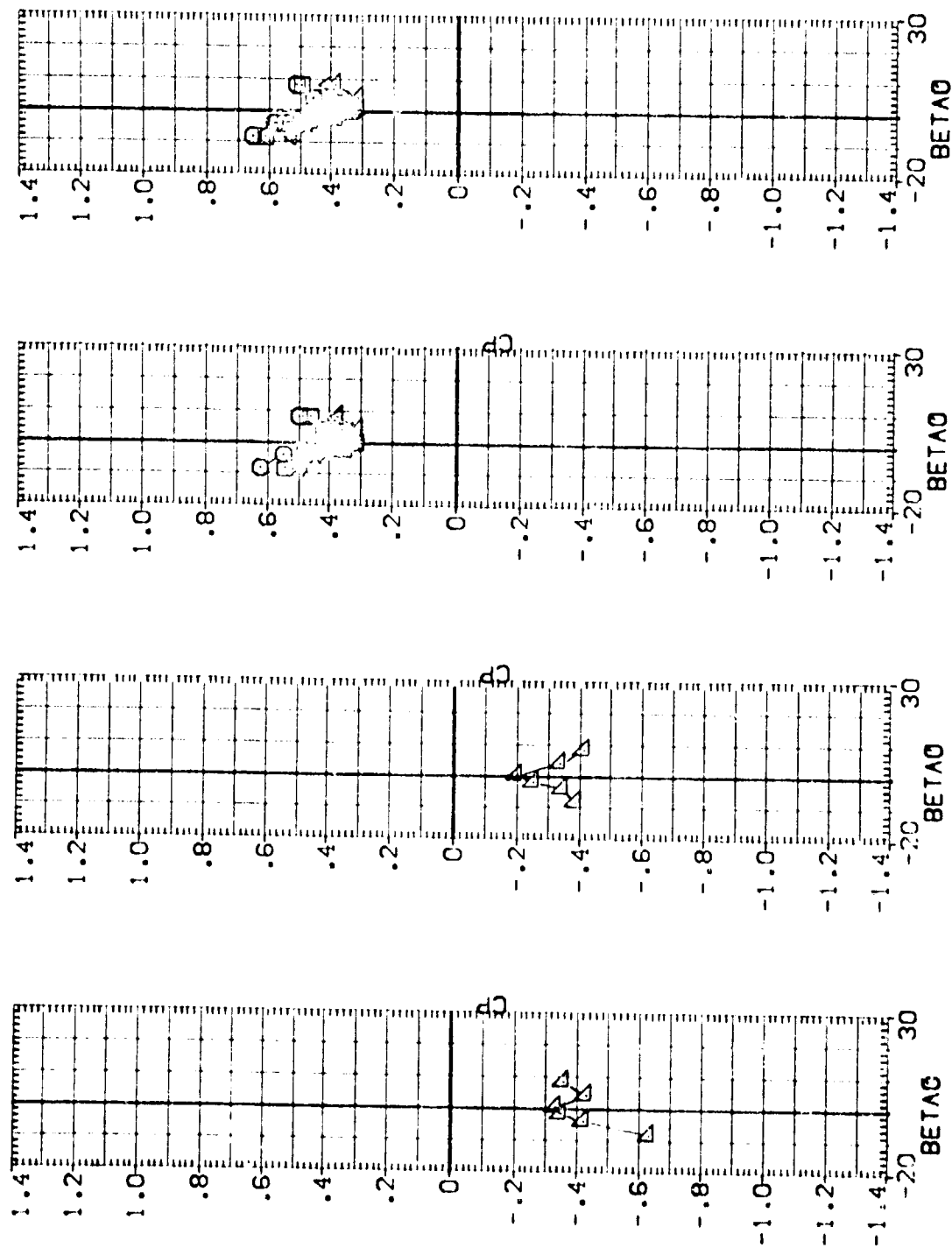
SYMBOL

V/BV	X/LB	ALPHA
-.170	.126	7.910
-.149	.133	
-.107	.811	
-.055	.919	
-.064		

PARAMETRIC VALUES

1.250	ELEVON	.000
.000	SPDRK	.000

MACH
RUDDER



ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

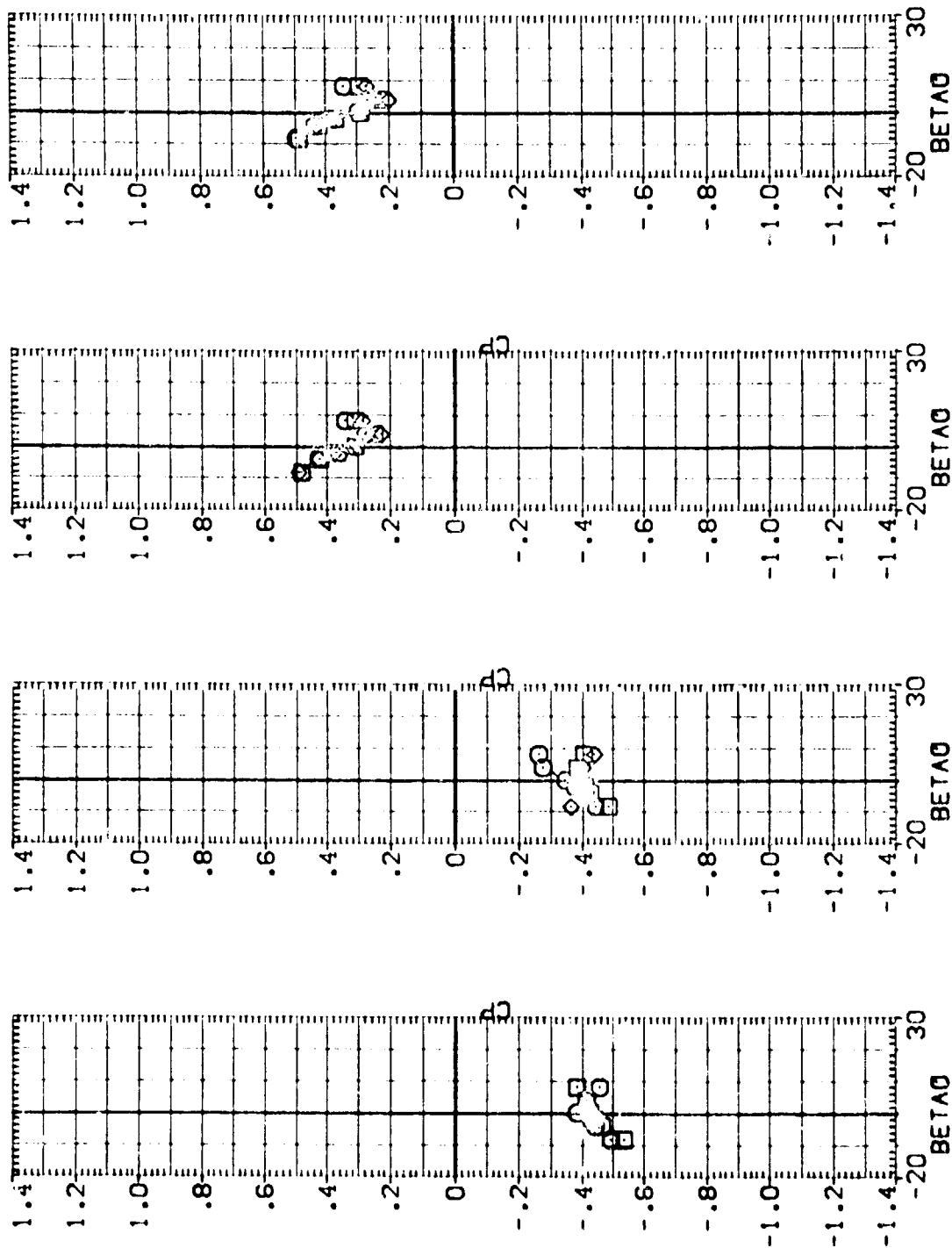
SYMBOL

○ □ ◇

Y/BV X/LB ALPHA0
 -.043 .126 7.910
 -.021 .133
 .000 .811 .819

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

MACH
 RUDDER



ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ORB ATTACH PTS(RB1133)

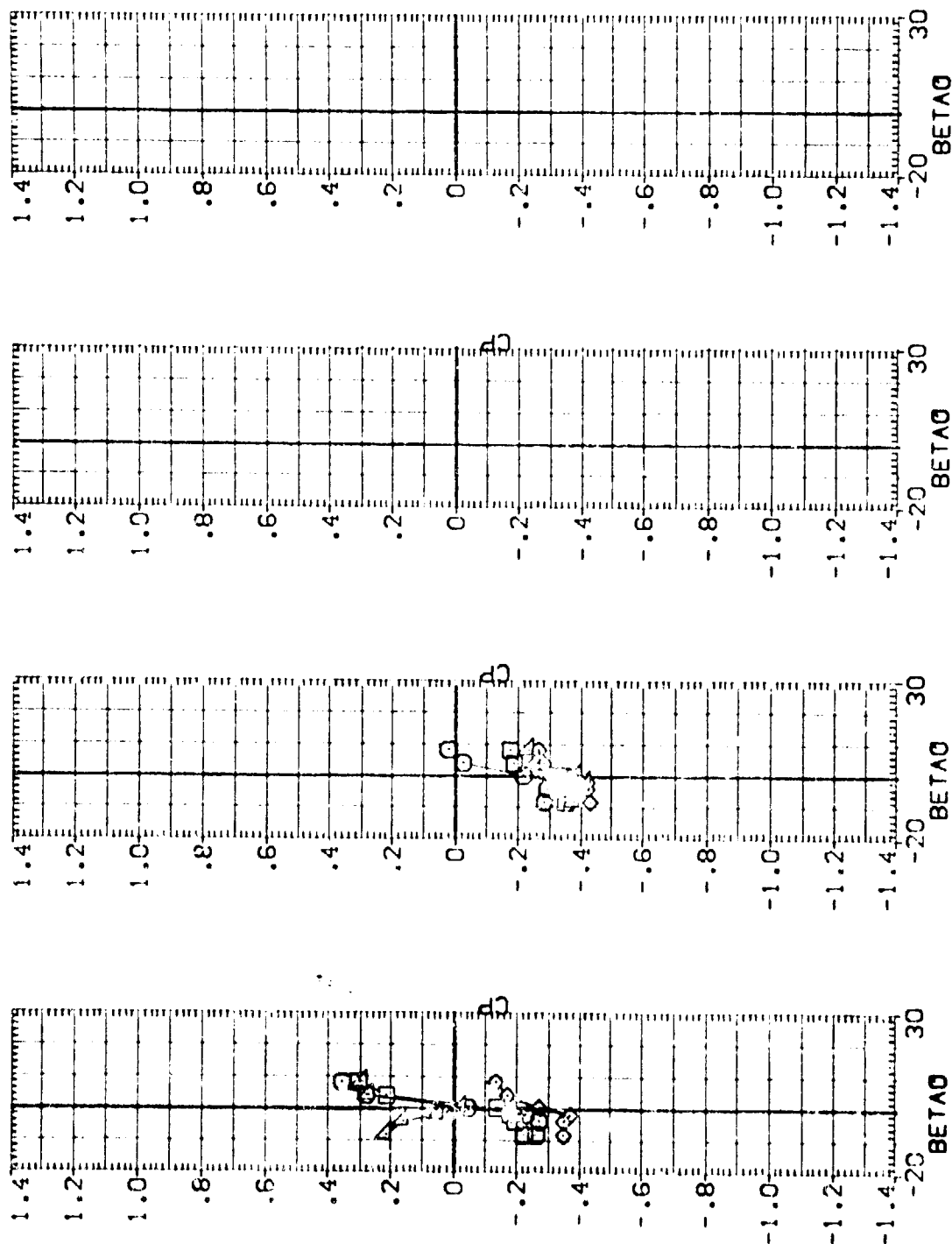
SYMBOL

□ □ ◇ △

Y/BV	X/LB	ALPHA
-.277	.827	7.910
-.256	.836	
-.234	.850	
-.213	.858	
-.192		

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOILER .000

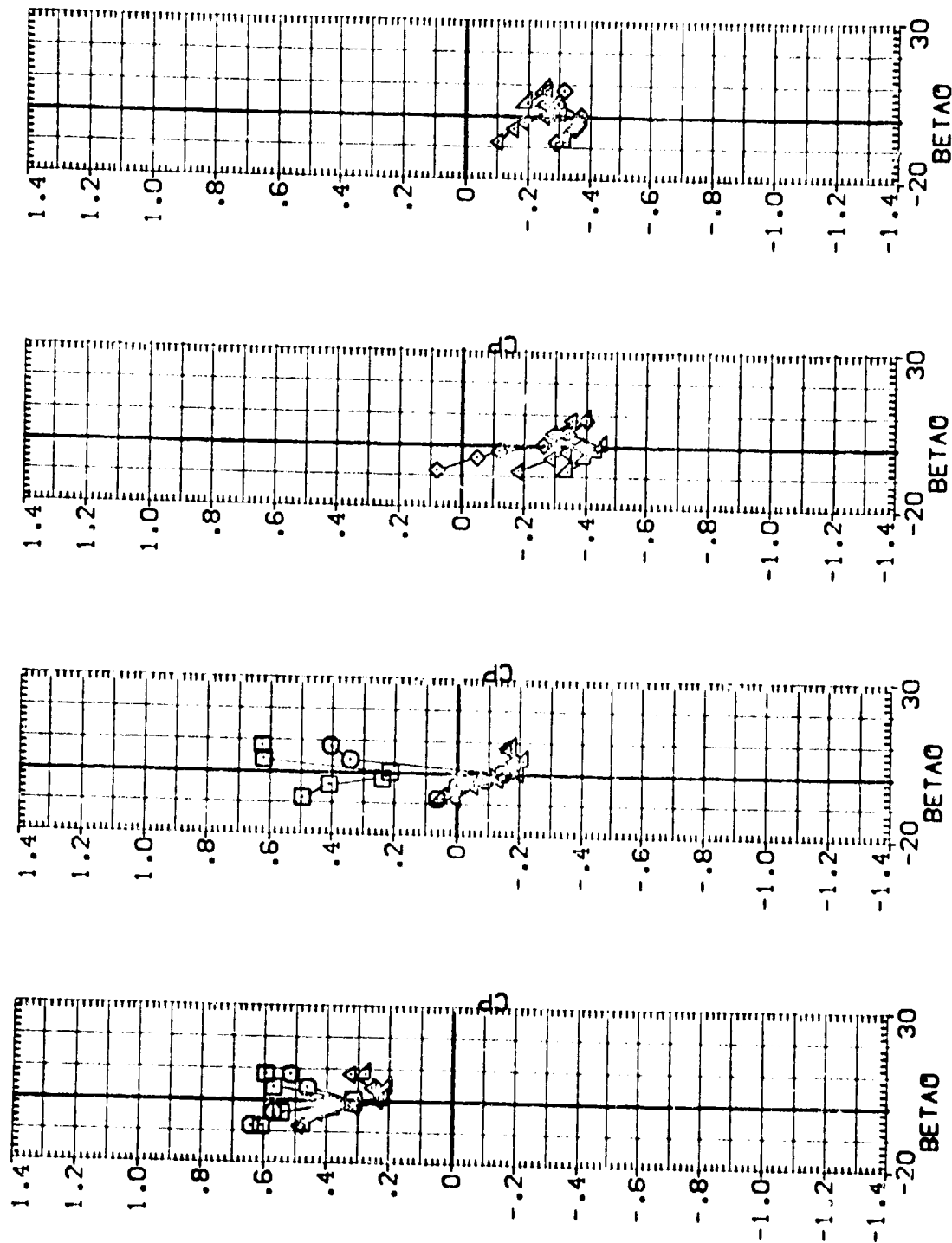
MACH
RUCER



ORBITER ATTACH POINTS PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ORB ATTACH PTS(RB1133)

SYMBOL	Y/BV	X/LB	ALPHA-0	PARAMETRIC VALUES		
				1.250	ELEVON	.000
○	-.170	.827	7.910	.000	SPDRK	.000
□	-.149	.835				
◇	-.107	.850				
△	-.085	.858				
▽	-.054					



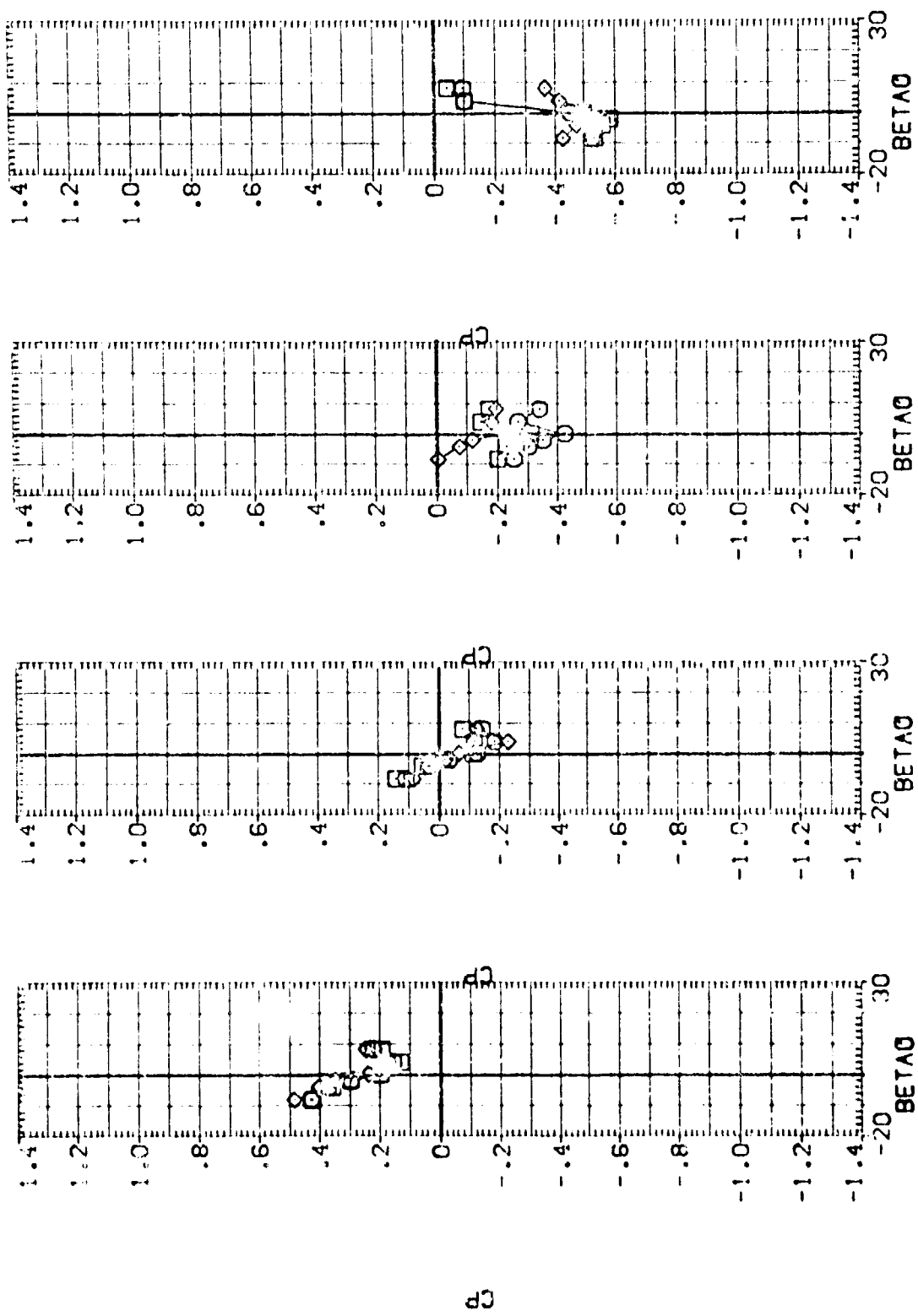
ORBITER ATTACH POINTS PRESSURES

ARC11-716 1A14 01-T12+S12N25+AT10 ORB ATTACH PIS(RB1133)

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

MACH
 RUDDER

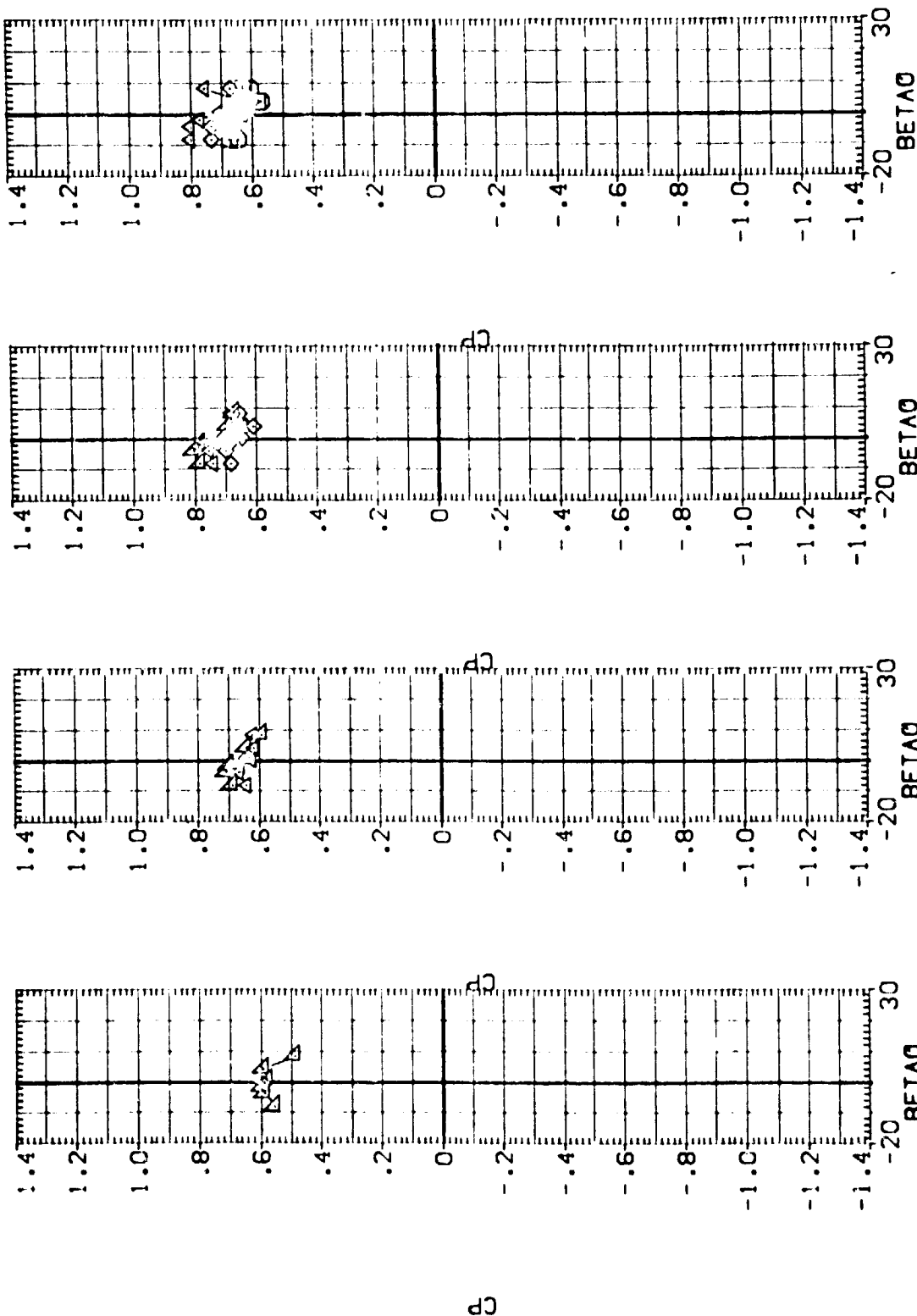
SYN-02 X/LB ALPHAO
 -.043 .827 7.910
 -.021 .835
 .000 .850
 .858



ORBITER ATTACH POINTS PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL	PHI	X/LT	ALPHA0	PARAMETRIC VALUES		
				MACH	ELEVON	SPDBRK
□	182.840	.391	-8.220	RUDDER	.000	.000
◇	185.380	.397			.000	.000
△	189.920	.402				
▽	193.460	.408				
◇	197.000					

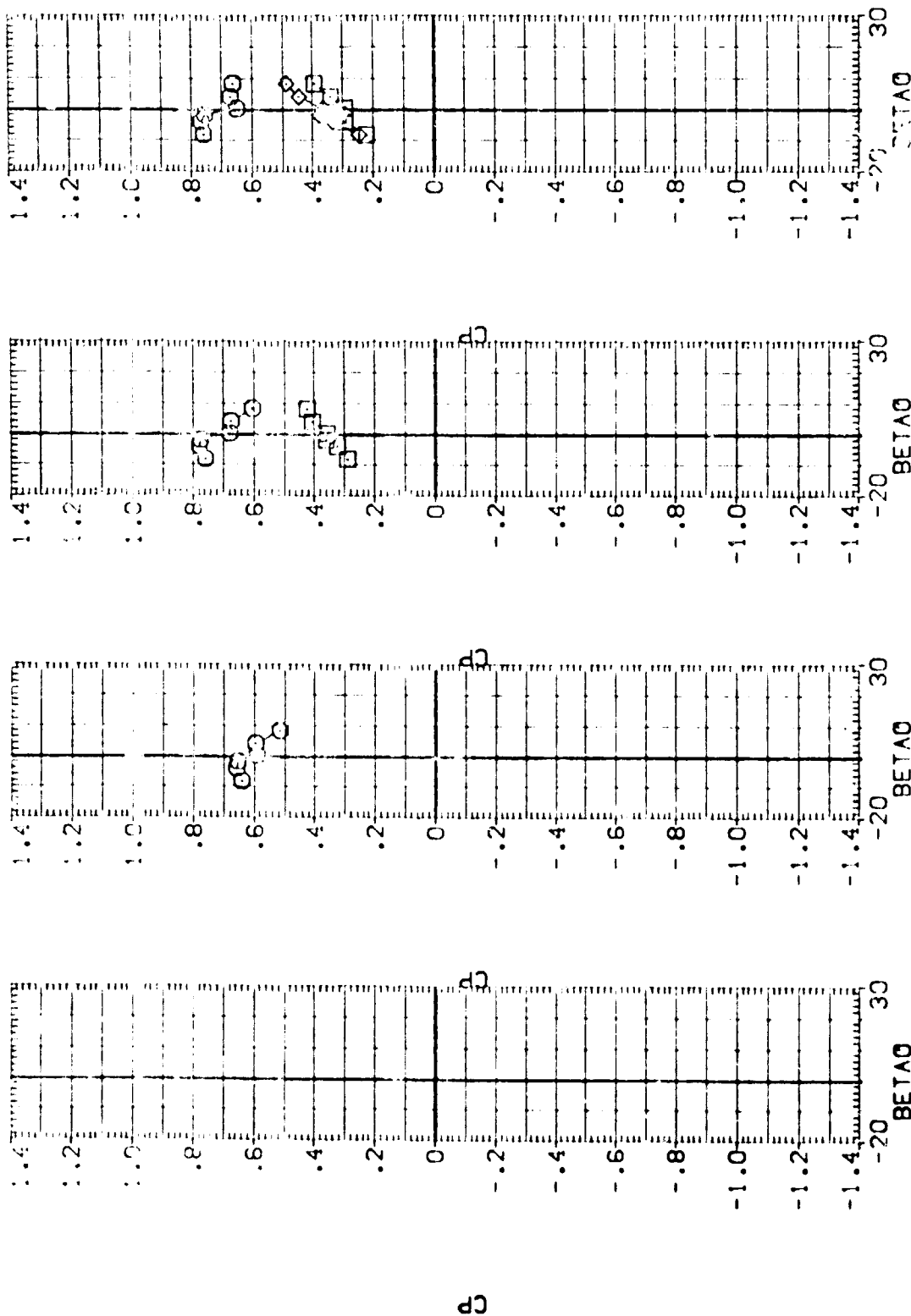


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL PH: X/LT ALPHA0
 011011 200.540 .391 -8.220
 204.090 .397
 207.620 .402
 222.840 .408
 230.380

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRN .000
 MACH
 RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ET ATTACH PTS. (RB1233)

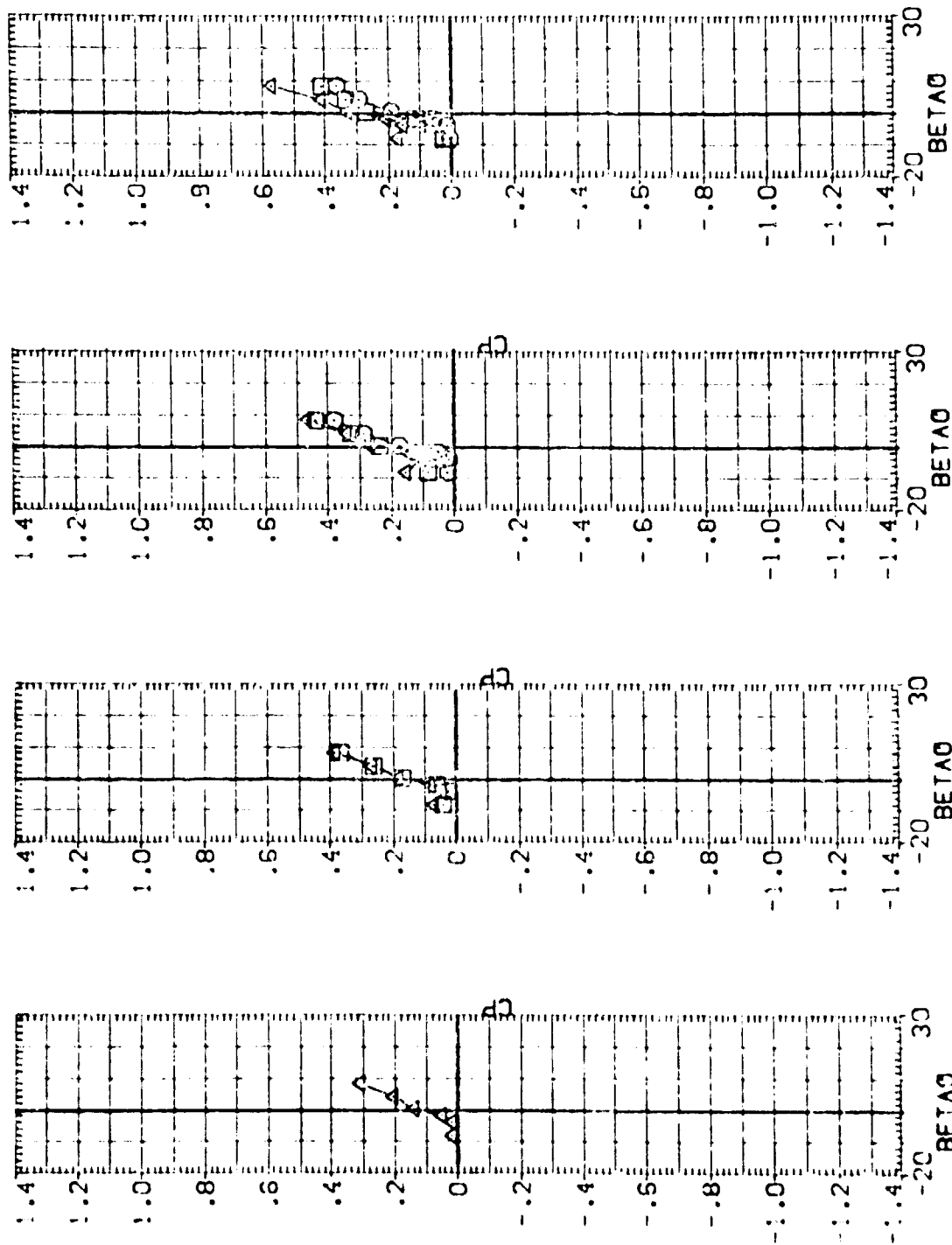
PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBRK

MACH
NUMBER

ALPHA0
-8.220

X/L1
.607
.812
.818
.823

SYMBOL
011041



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC:11-716 1A14 01+112+S12+25+AT10 ET ATTACH PIS. (RB1233)

PARAMETRIC VALUES
 1.250 ELEV: .000
 .000 SPOOR .000

MACH
 RUOER

ALPHA0

K/LT

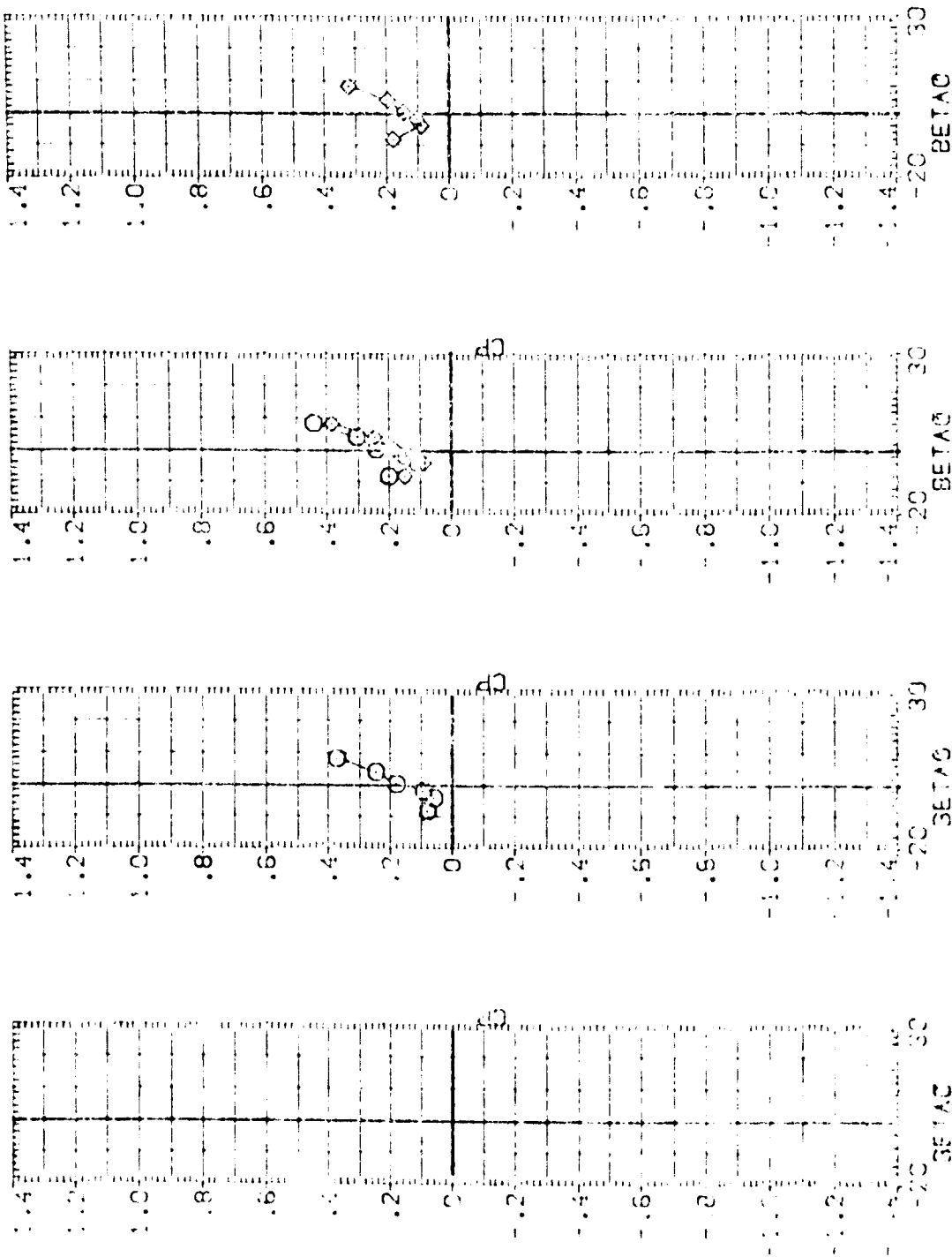
PHI

SYMBOL

240.540
 241.125
 241.000
 244.550
 248.200

.807
 .812
 .818
 .823

-81.220



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

SYMBOL

PHI

X/LT

ALPHA0

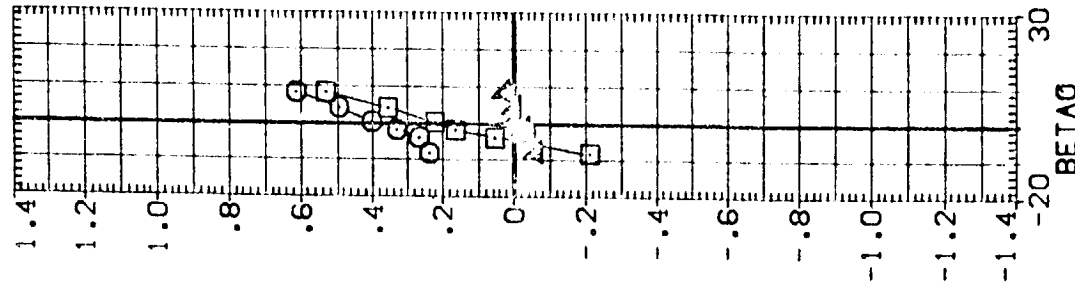
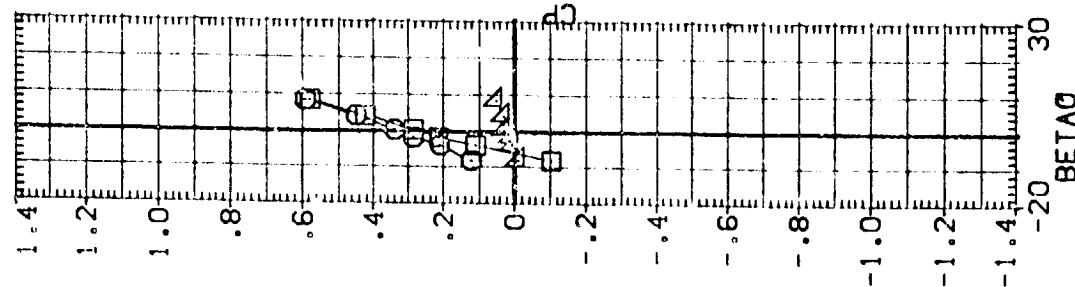
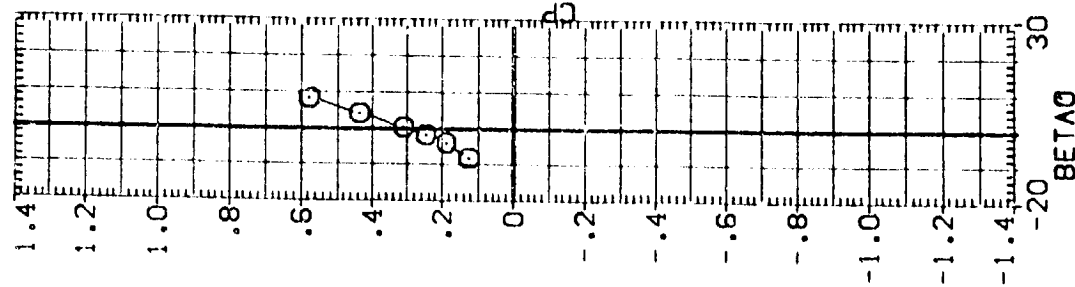
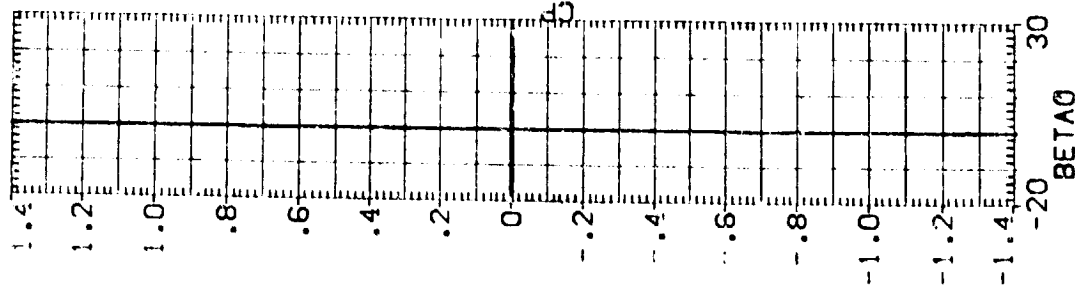
251.740
255.280
323.510
327.050
330.590

.916
.921
.927
.932

-8.220

MACH
RUDDER

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBRK
.000



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 E1 ATTACH P1S. (RB1233)

SYMBOL

PHI

X/LT

ALPHA

334.130
337.670
341.210
344.750

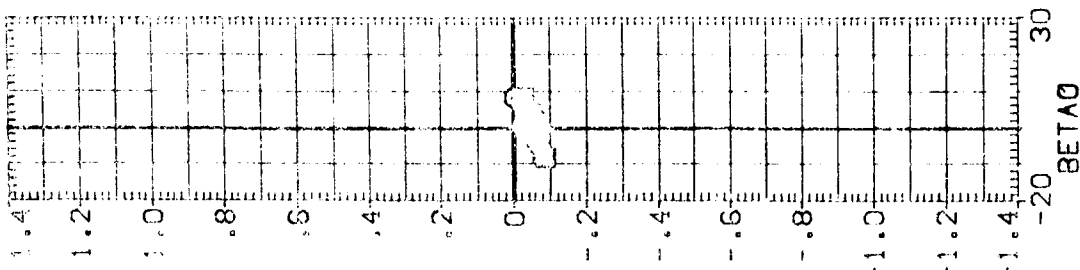
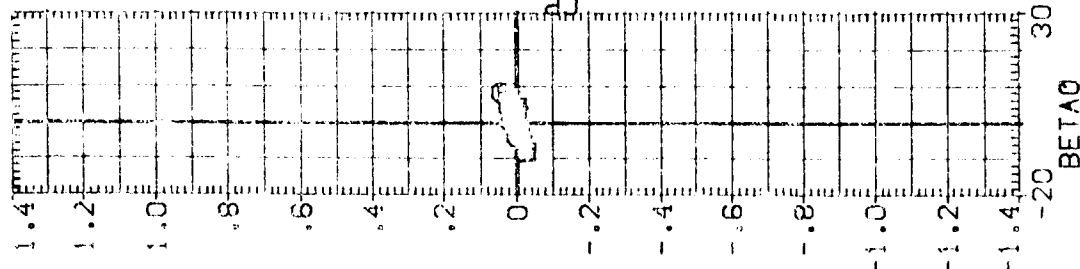
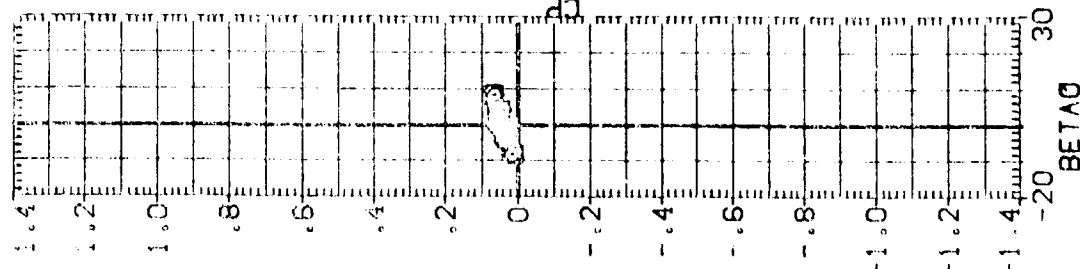
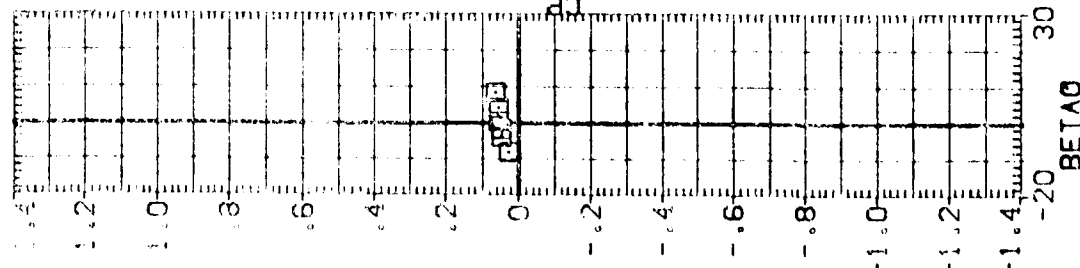
.916
.921
.927
.932

-8.220

PARAMETRIC VALUES

1.250 ELEVON
.000 SPOBRK
.000

HACH
RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES



ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL

PHI

X/LT

ALPHA0

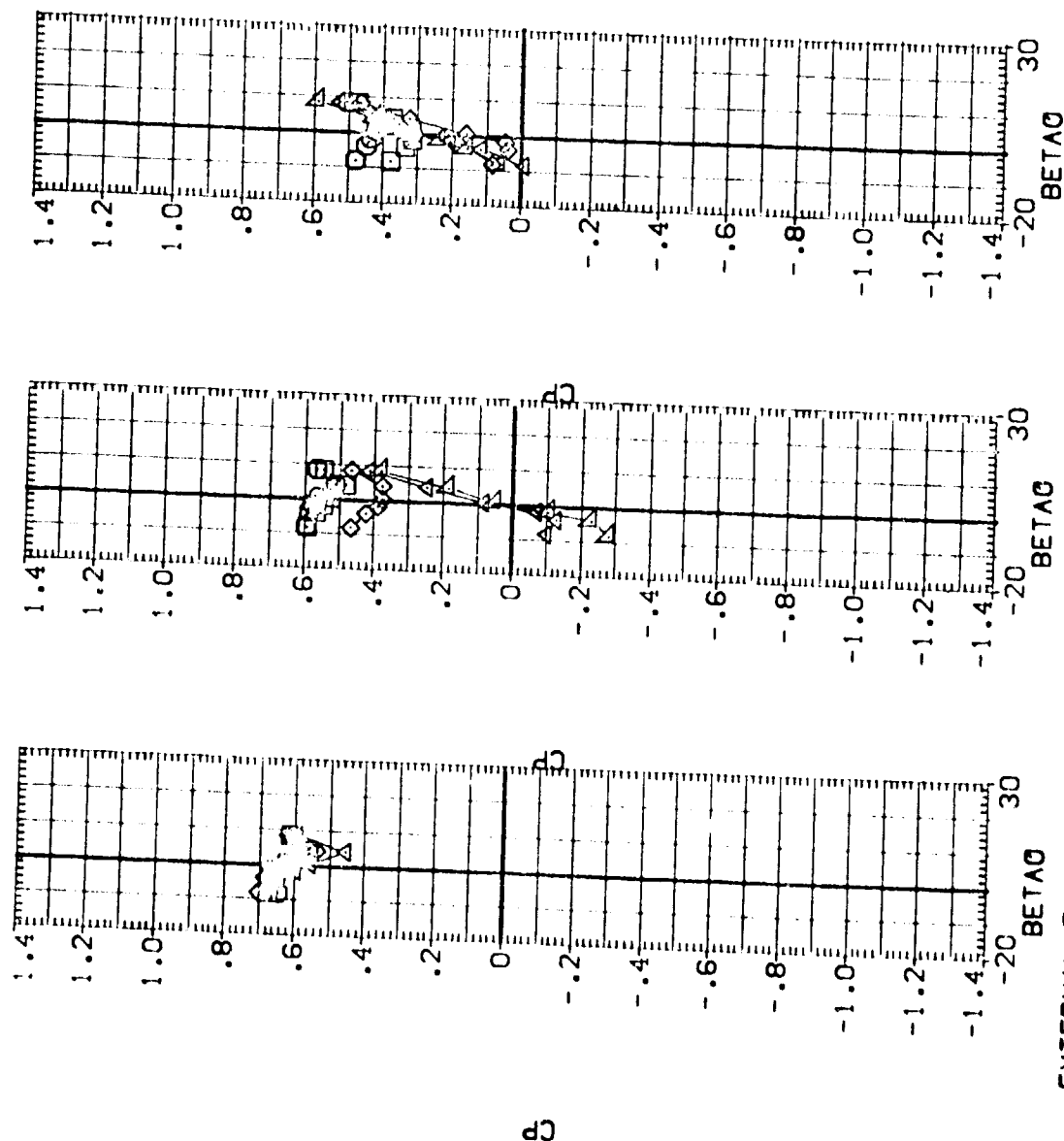
182.840
186.380
189.920
193.460
197.000

.413
.419
.424

-8.220

PARAMETRIC VALUES

MACH
RUDDER
1.250
.000
ELEVON
SPOBRK
.000
.000



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBRK
.000

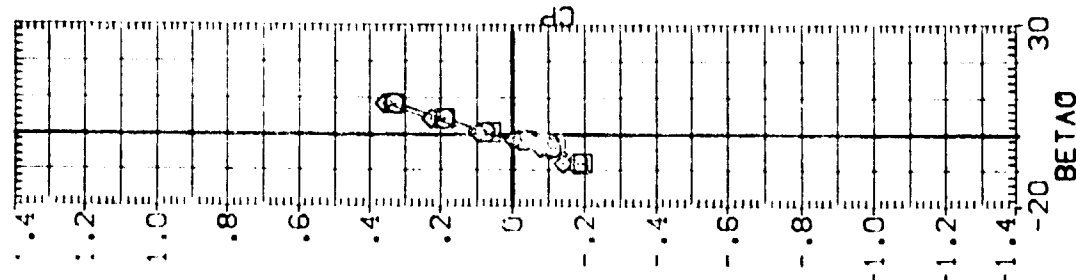
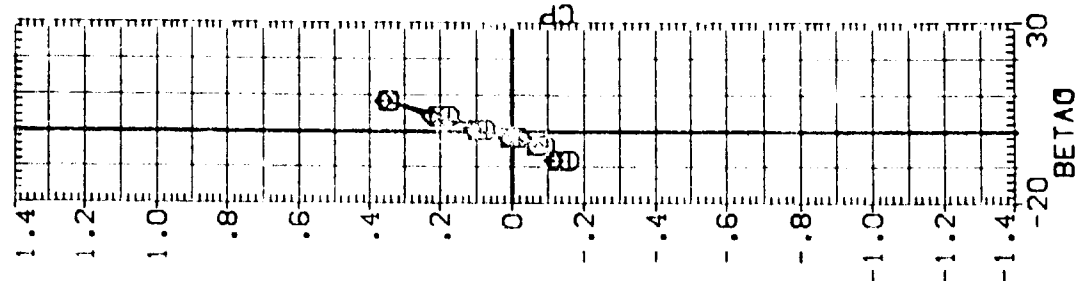
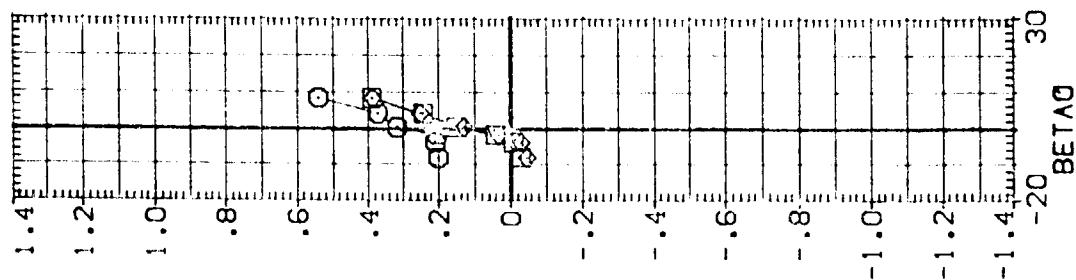
MACH
RUDDER

ALPHA0
-8.220

X/LT
.413
.419
.424

PHI
200.540
204.080
207.620
222.840
226.360

SV400
011044

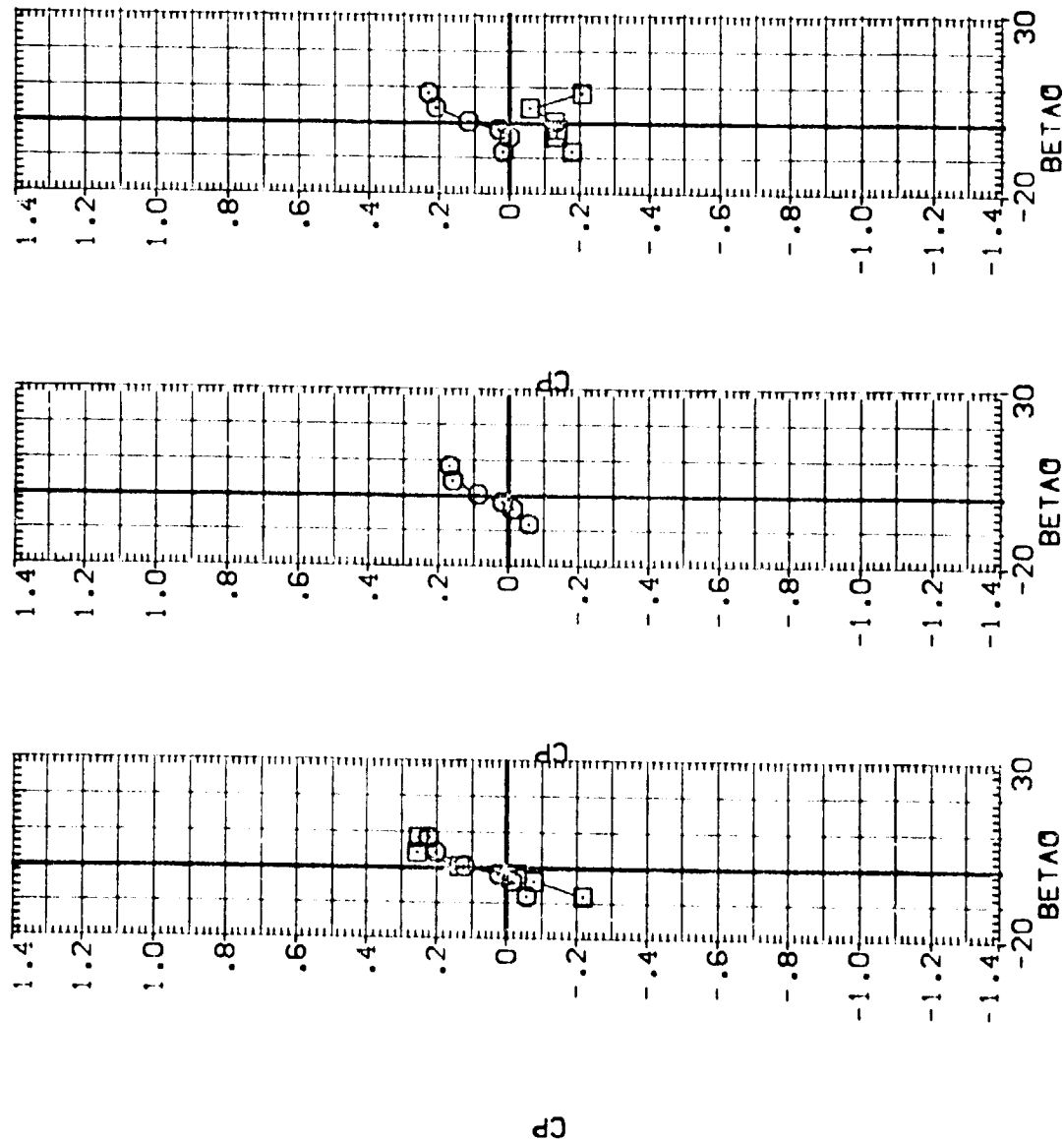


Cp

EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

SYMBOL	PHI	X/LT	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	SPOBRK
○	229.920	.828	-8.220	1.250	.000	.000
□	233.160	.834		.000		
◇	234.040	.839				
△	237.000					
▽	237.580					

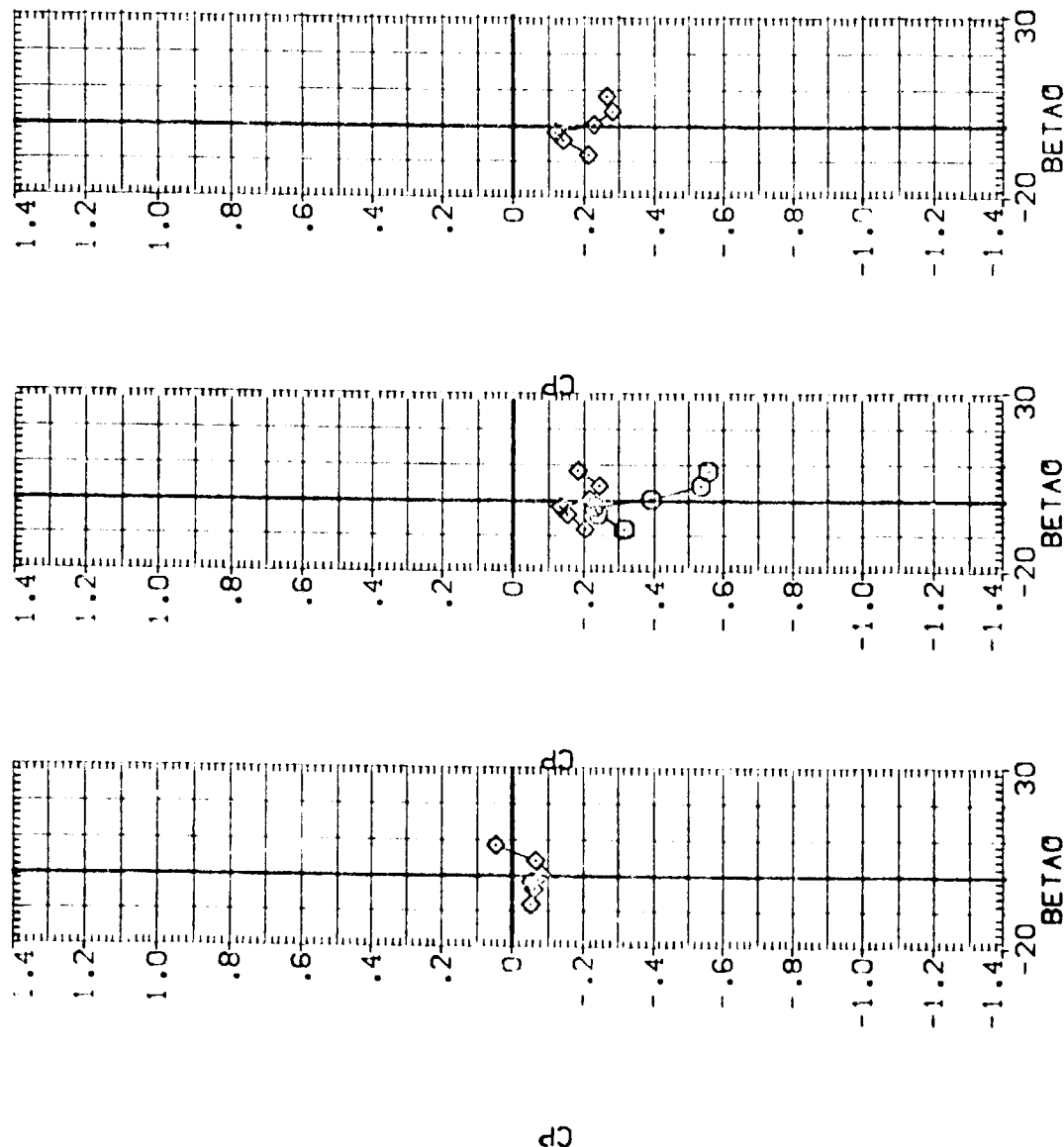


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC:11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOBRK .000

SYMBOL PHI X/LT ALPHA0
240.540 .828 -8.220
241.120 .821
244.080 .809
244.660
248.200



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-7:16 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOBRK
 .000

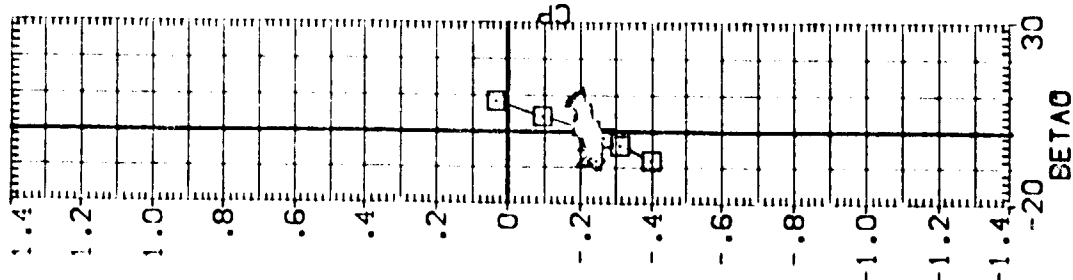
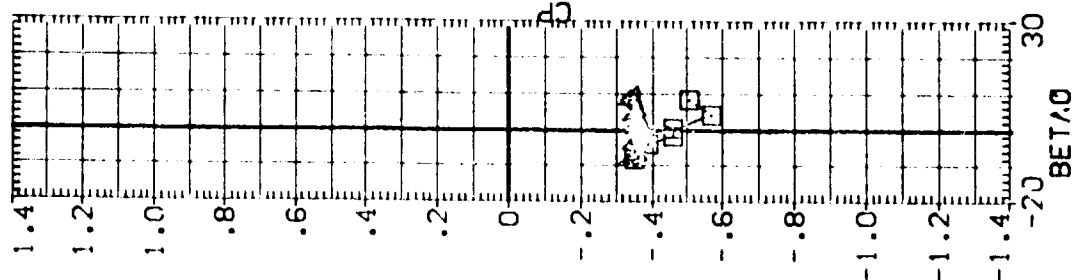
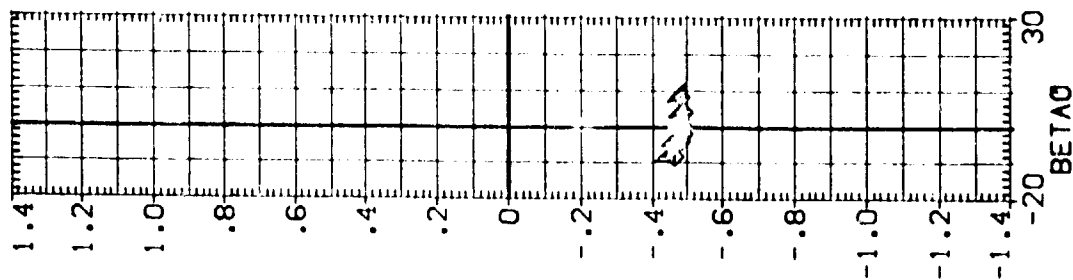
MACH
 RUDDER

PHI
 .938
 .943
 .948

ALPHA
 -8.220

X/LT
 .938
 .943
 .948

SYMBOL
 O
 □
 ◇
 4
 1



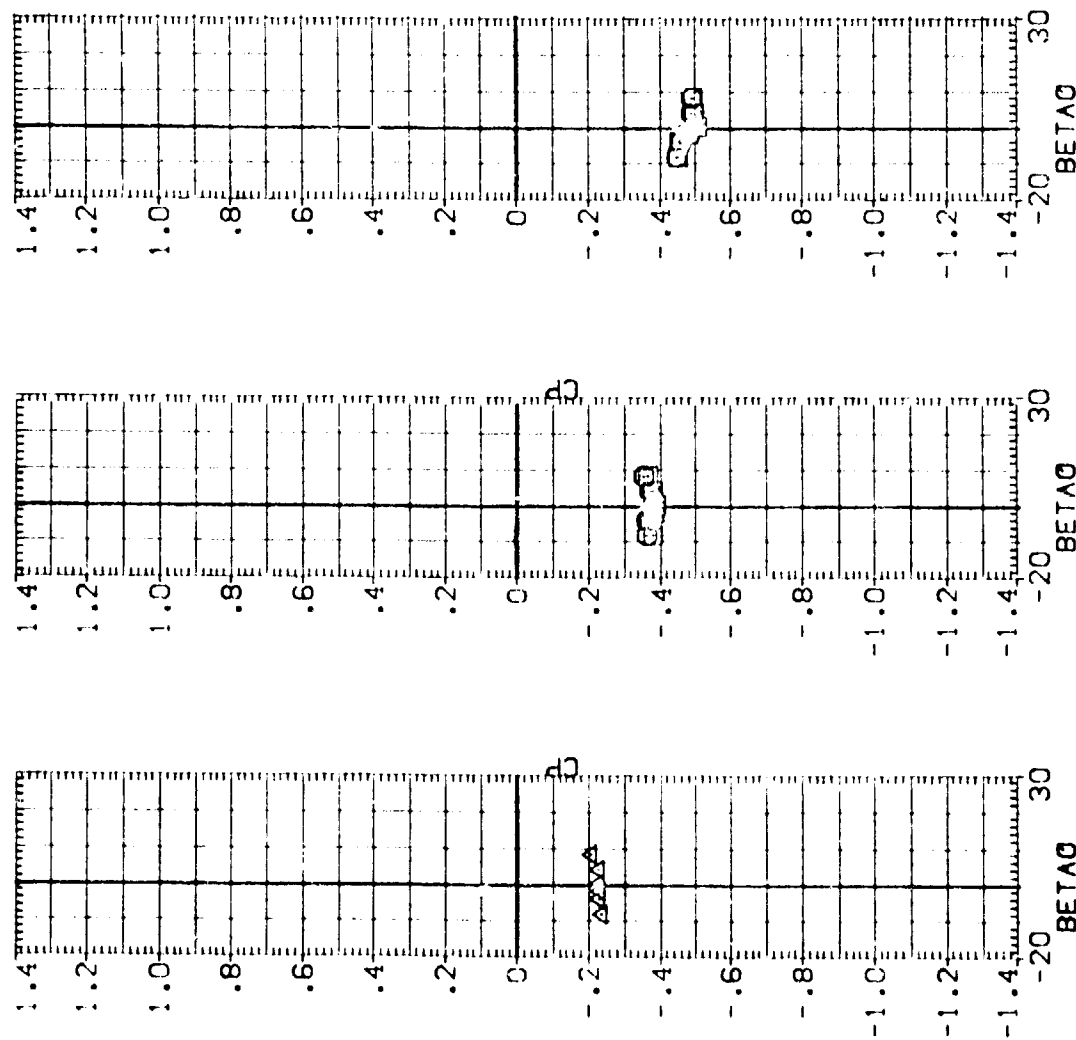
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 31+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOBRK
 .000

MACH
 RUDDER

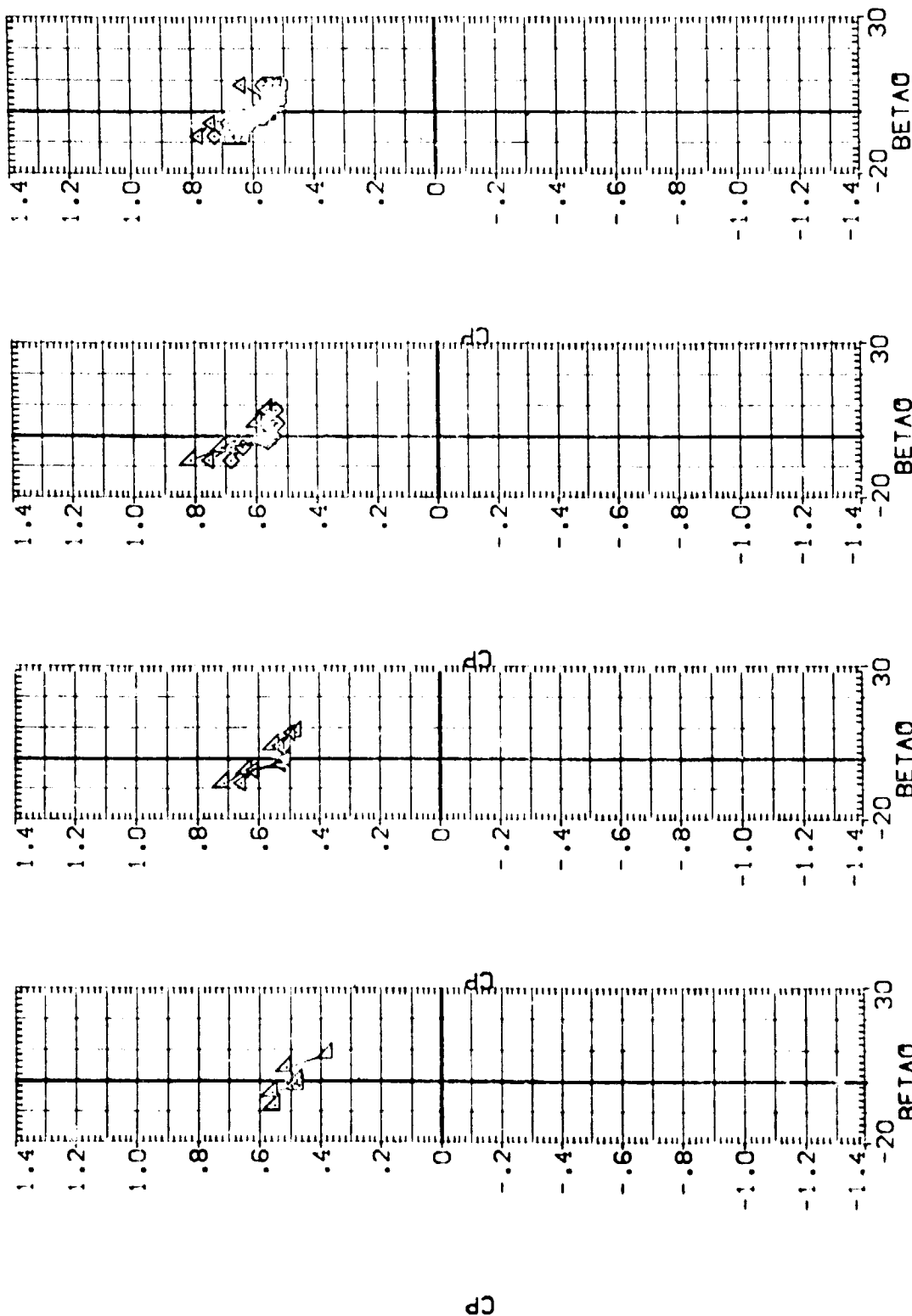
SYMBOL PH1 X/LT ALPHA0
 334.130 .938 -8.220
 337.670 .943
 341.210 .948
 344.750



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL	PHI	X/LT	ALPHA0	PARAMETRIC VALUES		
				MACH	ELEVON	SPDBRK
○	182.840	.391	-4.200		1.250	.000
□	186.380	.397		RUDDER	.000	.000
◇	189.920	.402				
△	193.460	.408				
▽	197.000					



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC!!-7!6 !A!4 G!+T!2+S!2N25+AT!0 ET ATTACH PTS. (RB!233)

Symptoms

五

XXIX

ALPHA

200.540

३.

4.200

204.080

397

207.620
200.810

.402

018.777
222.840

3.

1.4

PARAMETRIC VALUES

1.250

ELEVEN

100.

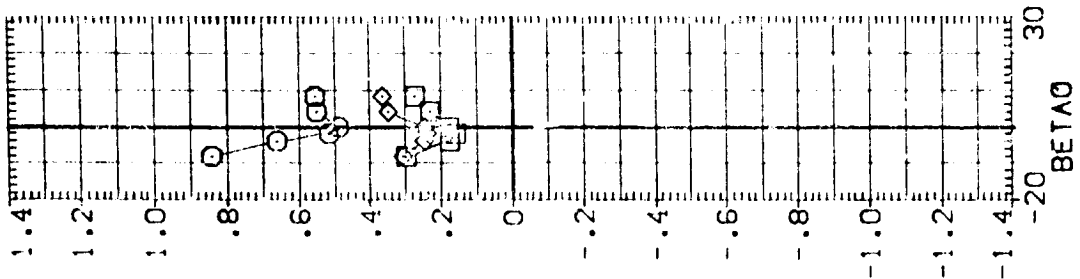
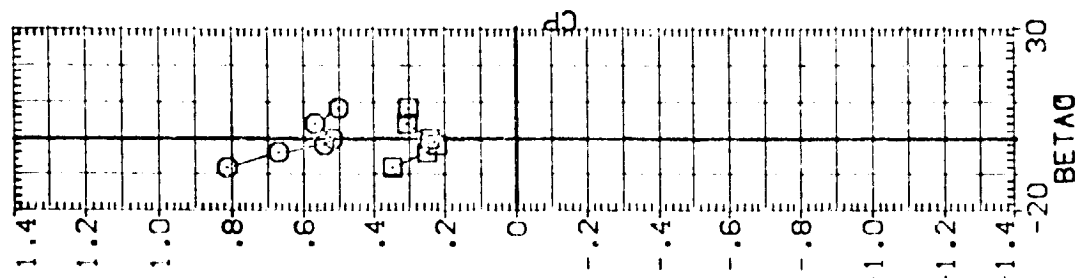
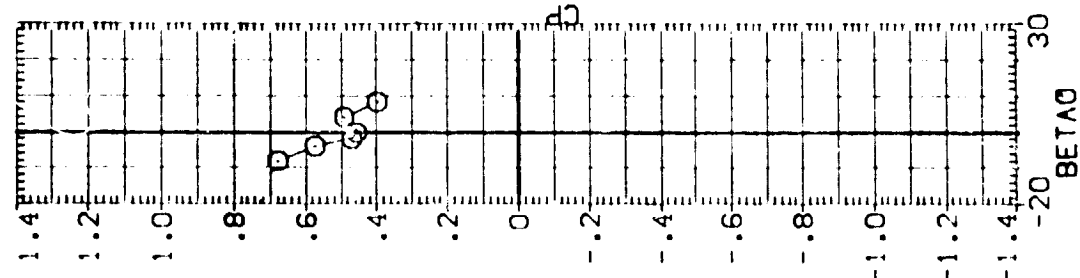
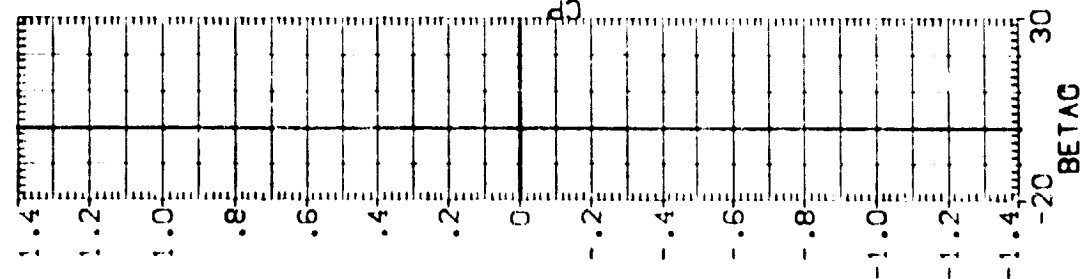
§.

SPD82K

66.

MACH

RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOBRK .000

MACH
RUDDER

ALPHA
-4.200

X/LT
.807

PHI
229.920

233.460

234.040

237.000

237.580

SYMBOL

0

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ARC11-7:16 1A14 01+12+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL
○ ○ ○ ○ ○

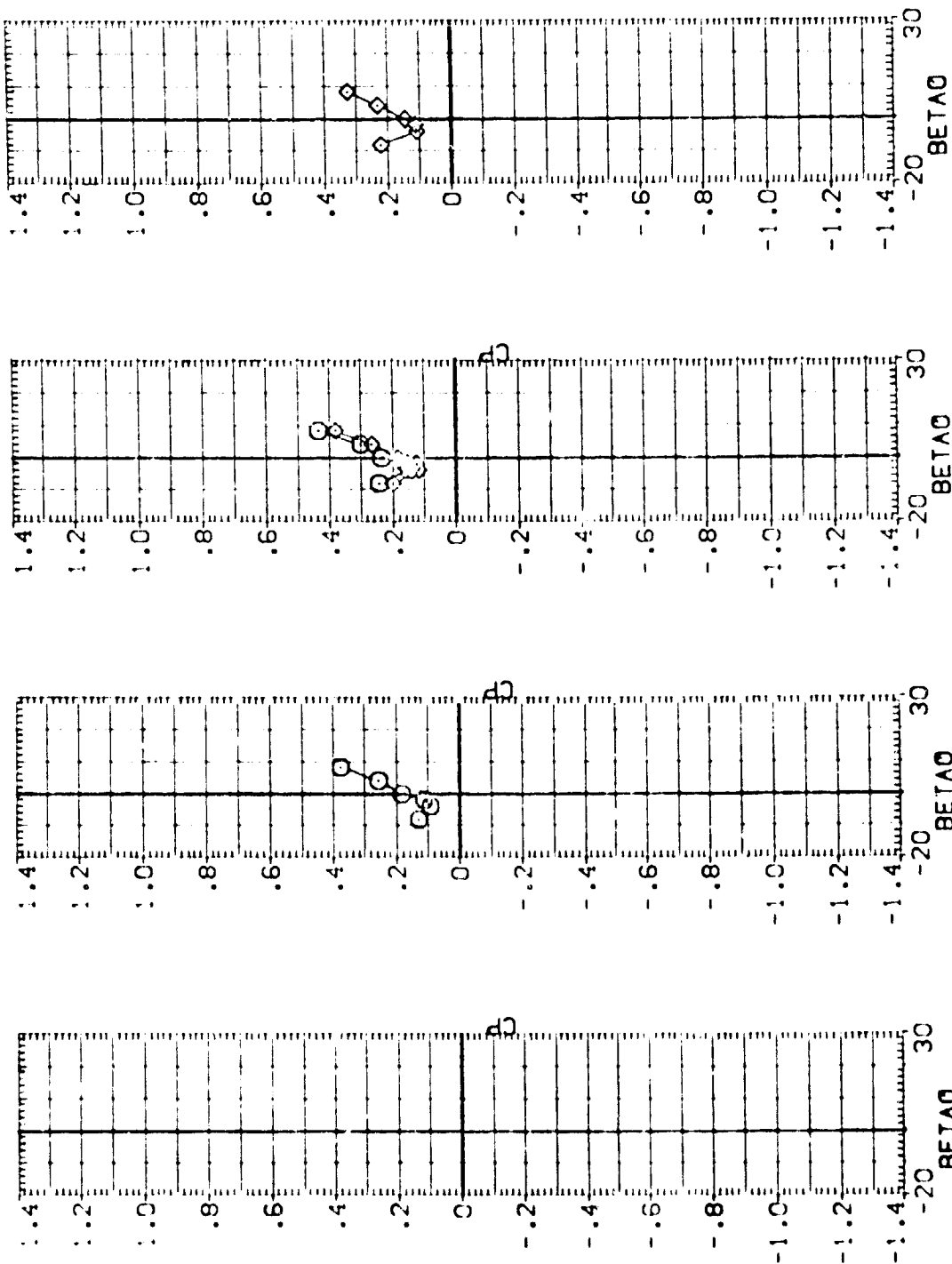
PHI
240.540
241.120
244.080
244.680
248.200

X/LT
.807
.812
.818
.823

ALPHA
-4.200

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBRK
.000

MACH
RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

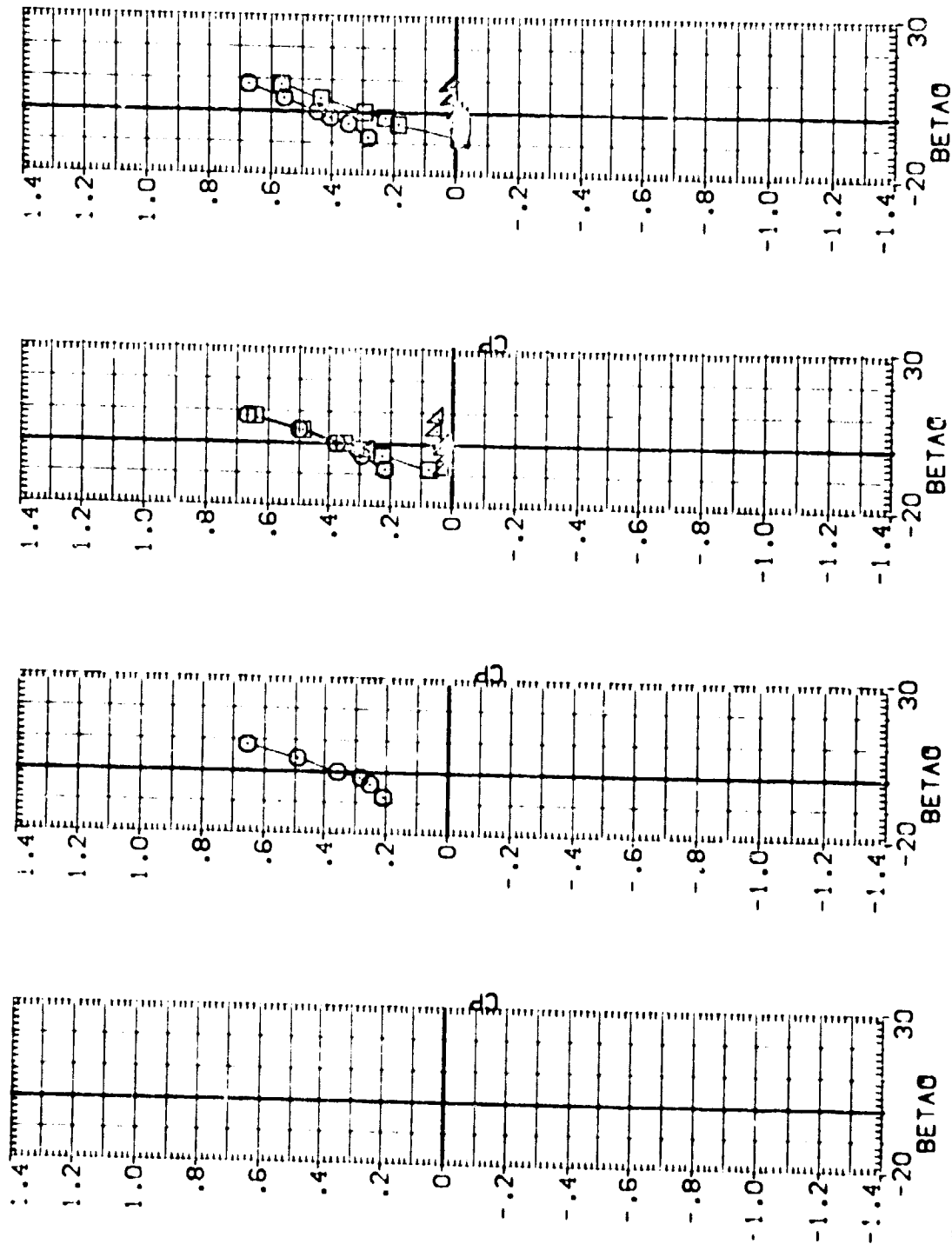
PARAMETRIC VALUES
1.250 ELEVATION .000
.000 SPOBRK .000

MACH
RUDDER

ALPHA
-4.200

PM1 X/LY
251.740 .916
255.280 .921
323.510 .927
327.050 .932
330.590

SYMBOL
O I D A 1



EXTERNAL TANK ATTACH POINTS PRESSURES

RC11-716 :A14 01+12+S12N25+AT10 ET ATTACH PTS.(RB1233)

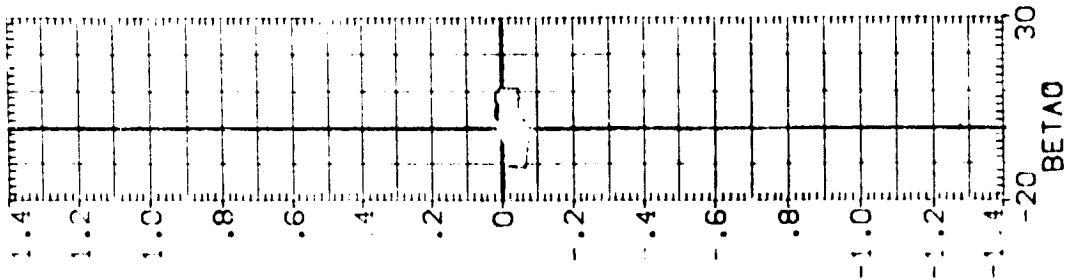
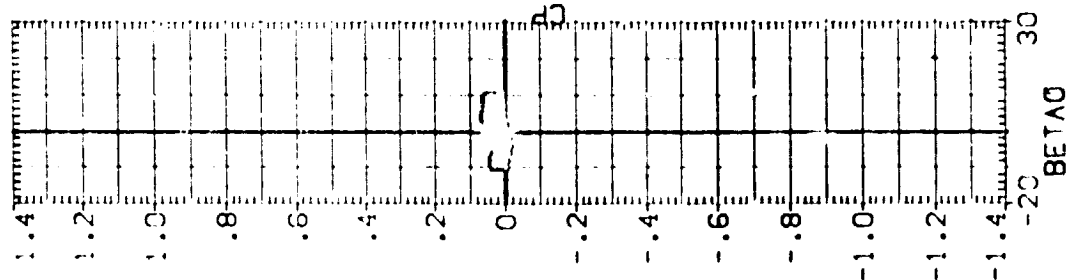
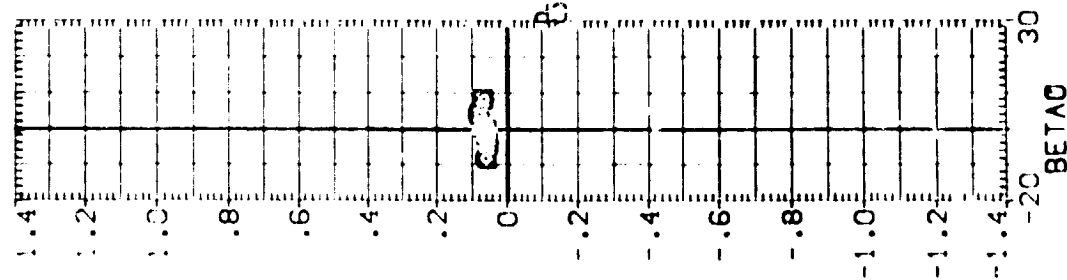
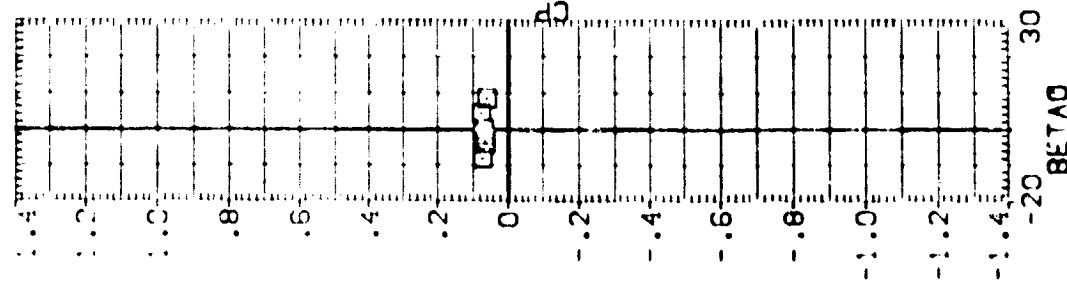
S 60
 334.130
 337.670
 341.210
 344.750

K/LT
 .916
 .921
 .927
 .932

ALPHA0
 -4.200

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

MACH
 RUDDER



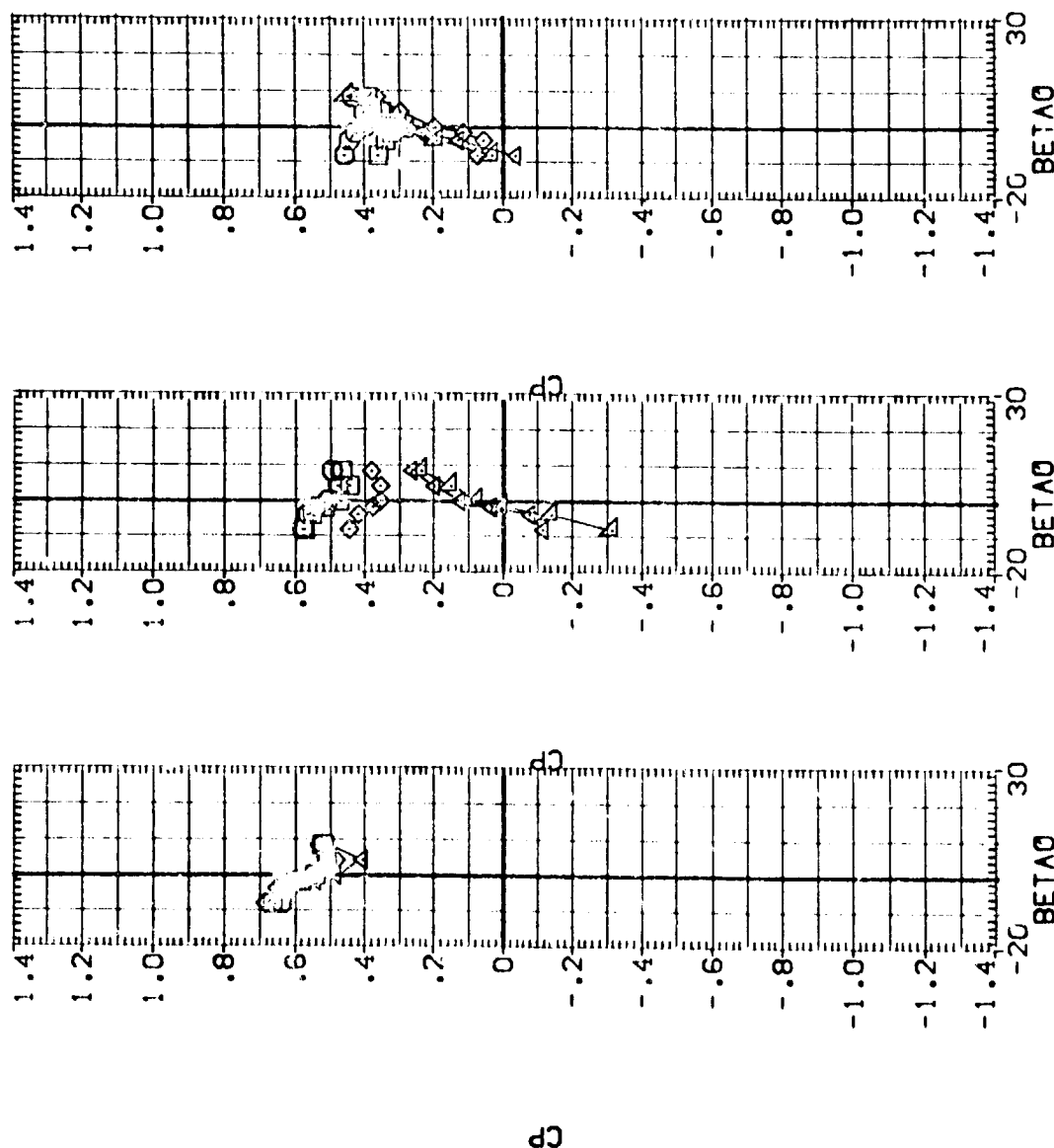
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000

PHI 1/2 LT ALPHAO
182.840 .413 -4.200
186.380 .419
189.920 .424
193.460
197.000

SYMBOL
○ □ ◇ △ ▽



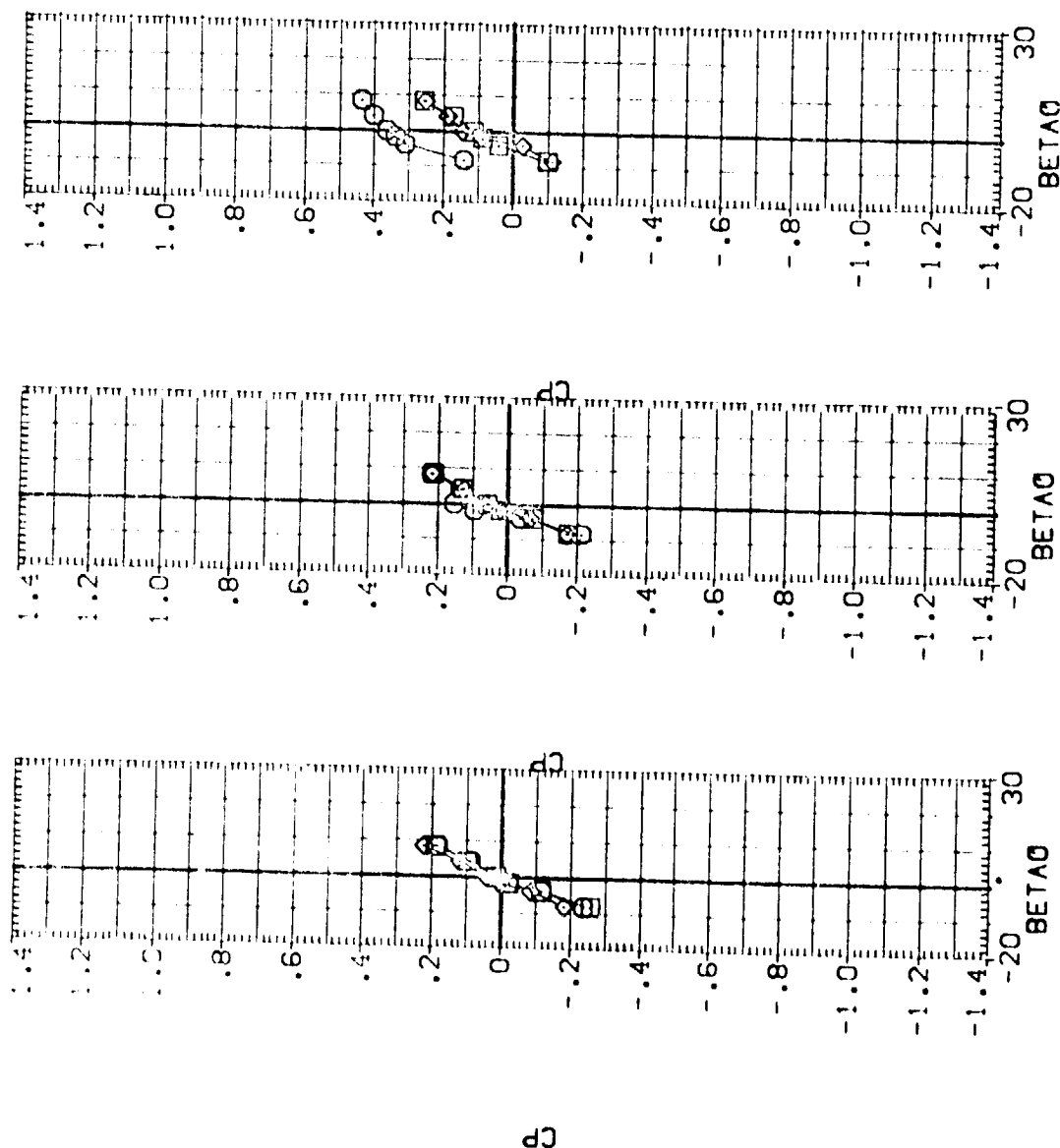
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 0.112+S12N25+AT10 ET ATTACH PFS.(RB.233)

SYMBOL P41 X/LT ALPHA0
 200.540 .413 -4.200
 204.080 .415
 207.620 .424
 222.840
 225.300

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOBRK
 .000

MACH
 RUDDER



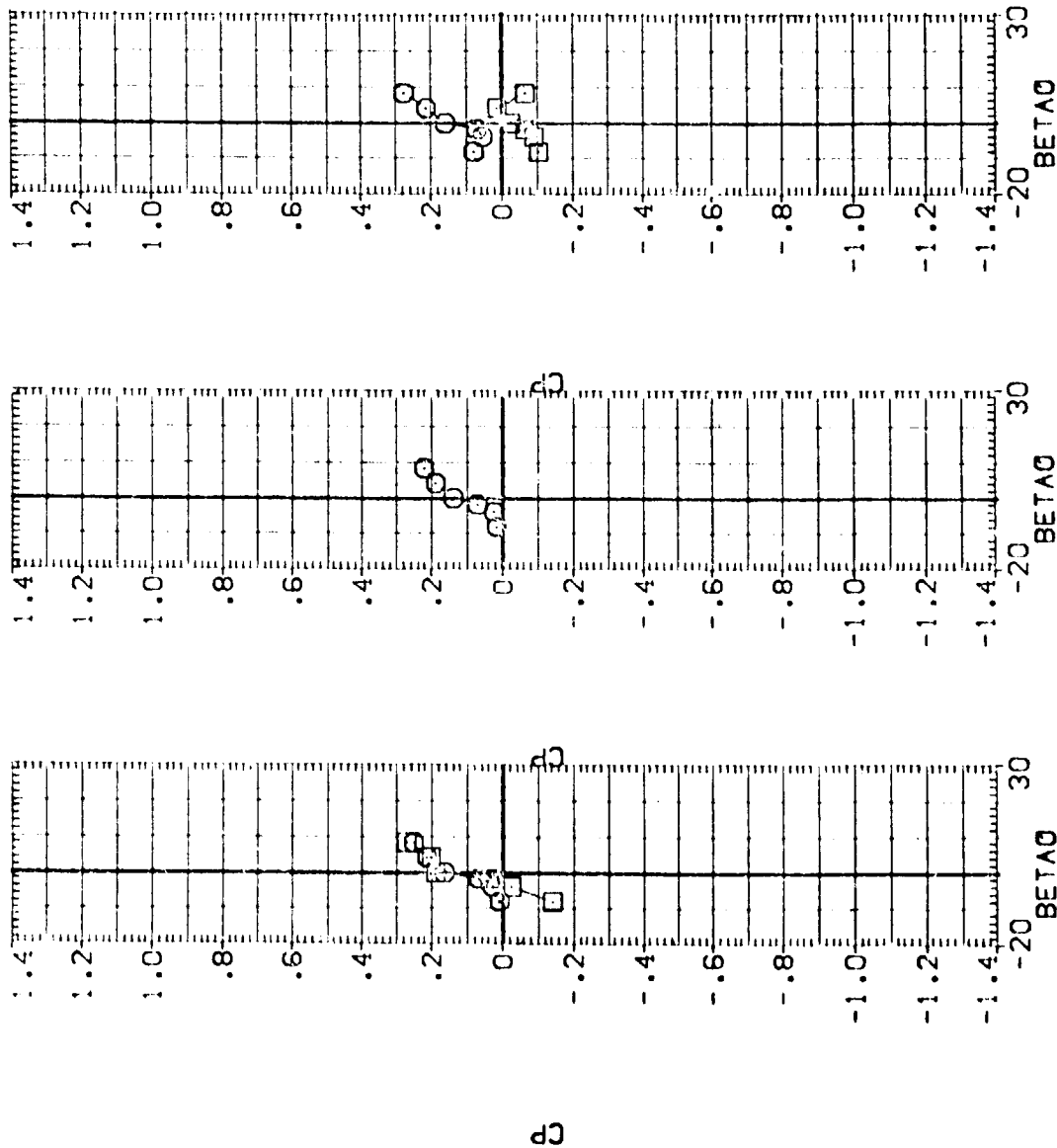
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS.(R81233)

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOONK
MACH
RUDDER

PHI
X/T
ALPHA
229.920
233.460
234.040
237.000
237.590

SYMBOL
O
◇
4
1

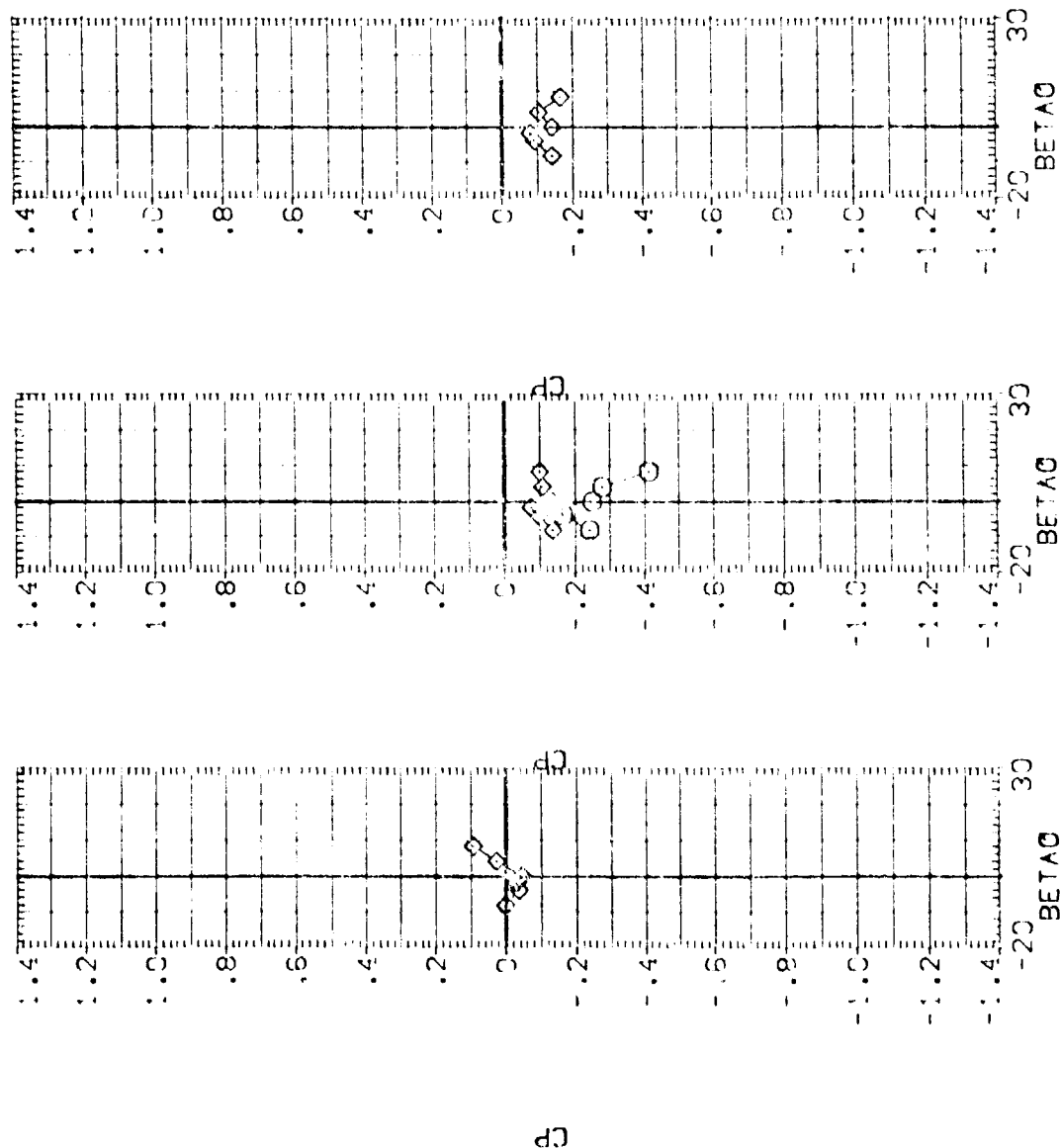


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+1:2+S12N25+AL10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
 1.250 ELEVON
 .000 RUDDER
 .000

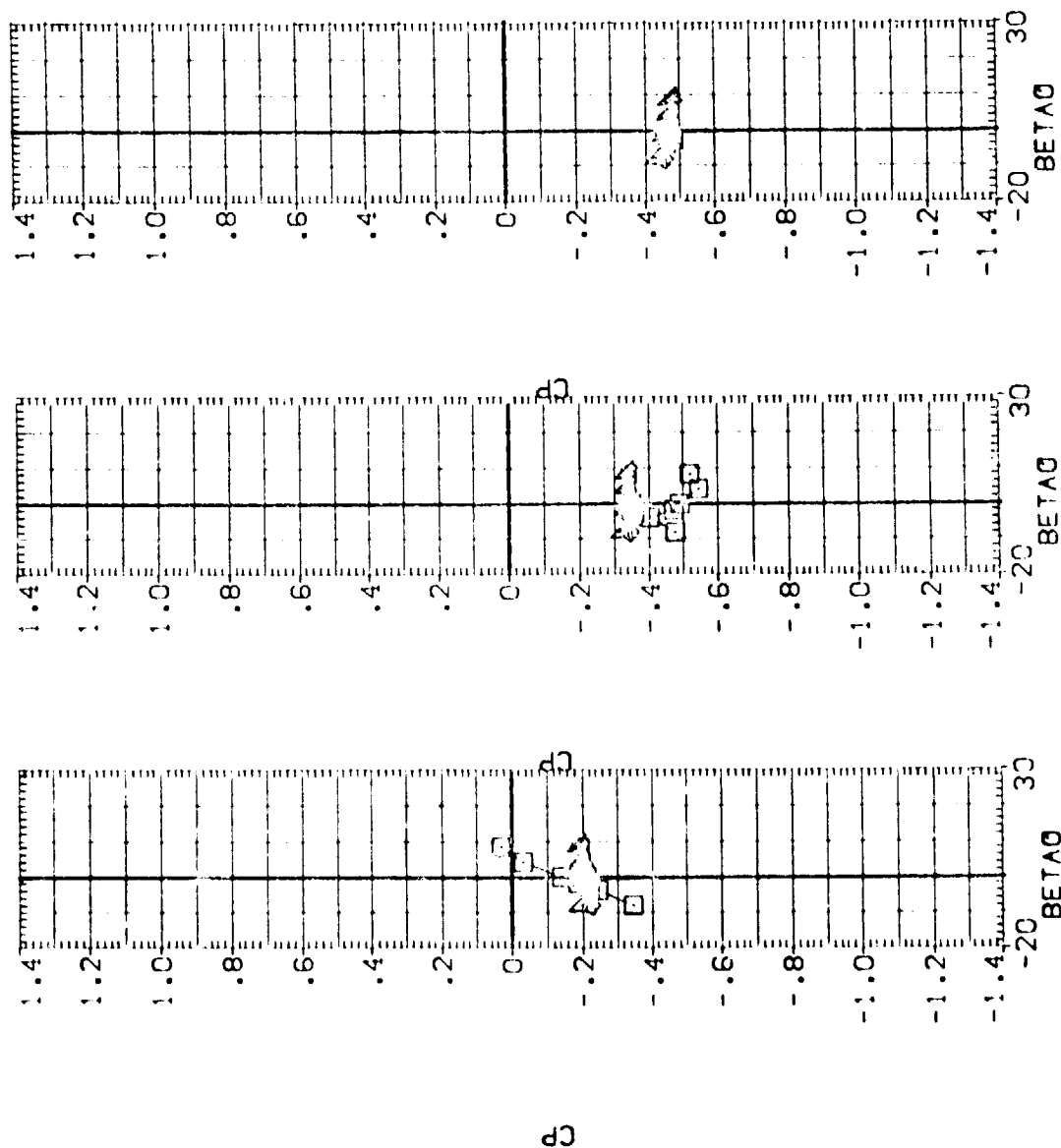
SYMBOL PHIL X/LT ALPHAO
 240.540 .828 -4.200
 241.120 .834
 244.080 .839
 244.650
 248.200



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+A110 ET ATTACH PTS. (RB1233)

SYMBOL	PHI	X/LT	ALPHA0	MACH	PARAMETRIC VALUES
0	251.740	.938	-4.200	RUDDER	1.250 ELEVON
1	255.280	.943			.000 SPOILER
2	323.510	.948			
3	327.050				
4	330.590				



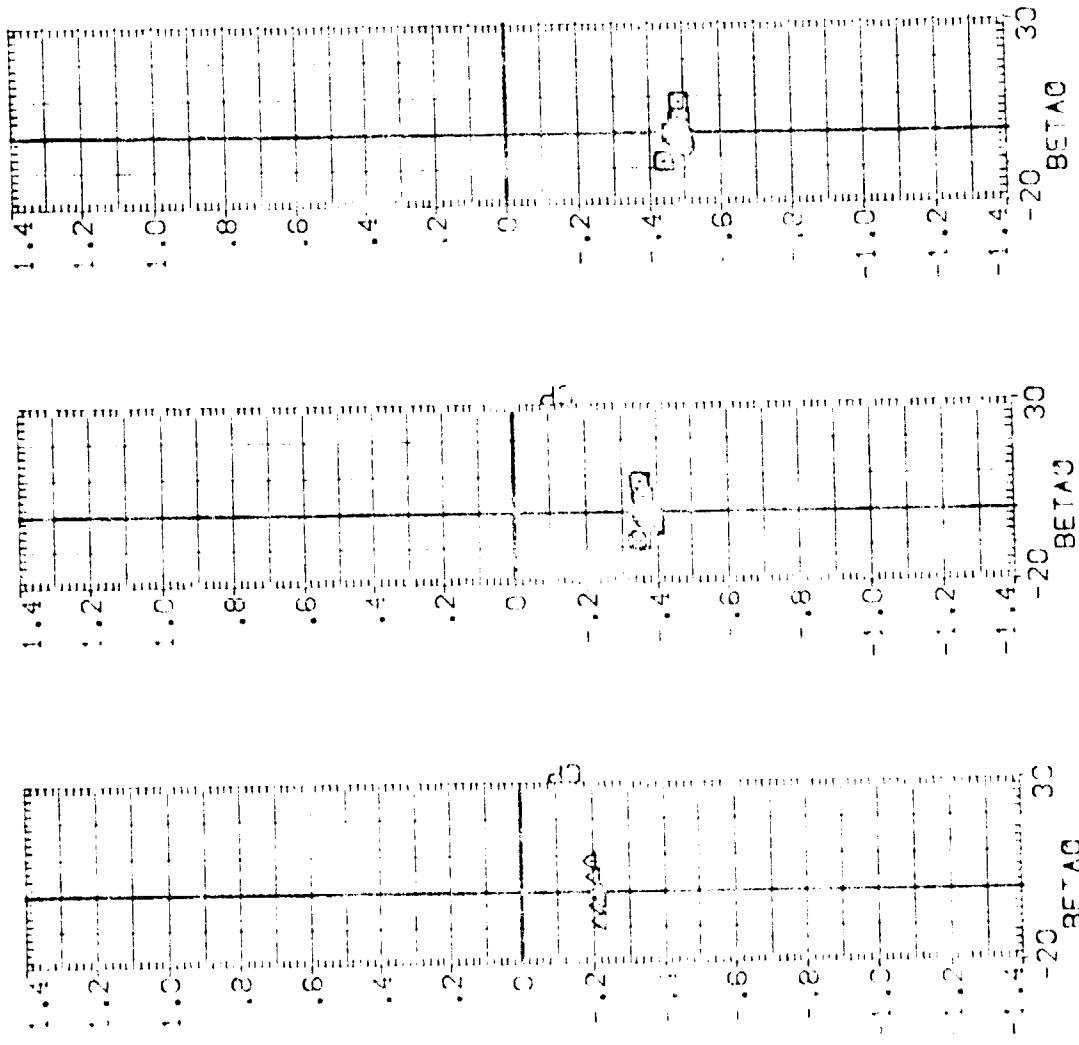
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-718 IA14 01+12+S12N25+AT10 ET ATTACH PTS.(RB1233)

SYMBOL
□ □ □ △

P-I X/LT ALPHA
334.130 .938 -4.200
337.670 .943
341.210 .948
344.750

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBRK
MACH
RUCER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC:1-7:16 1A14 01+12+S:2.25+A:10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOON .000

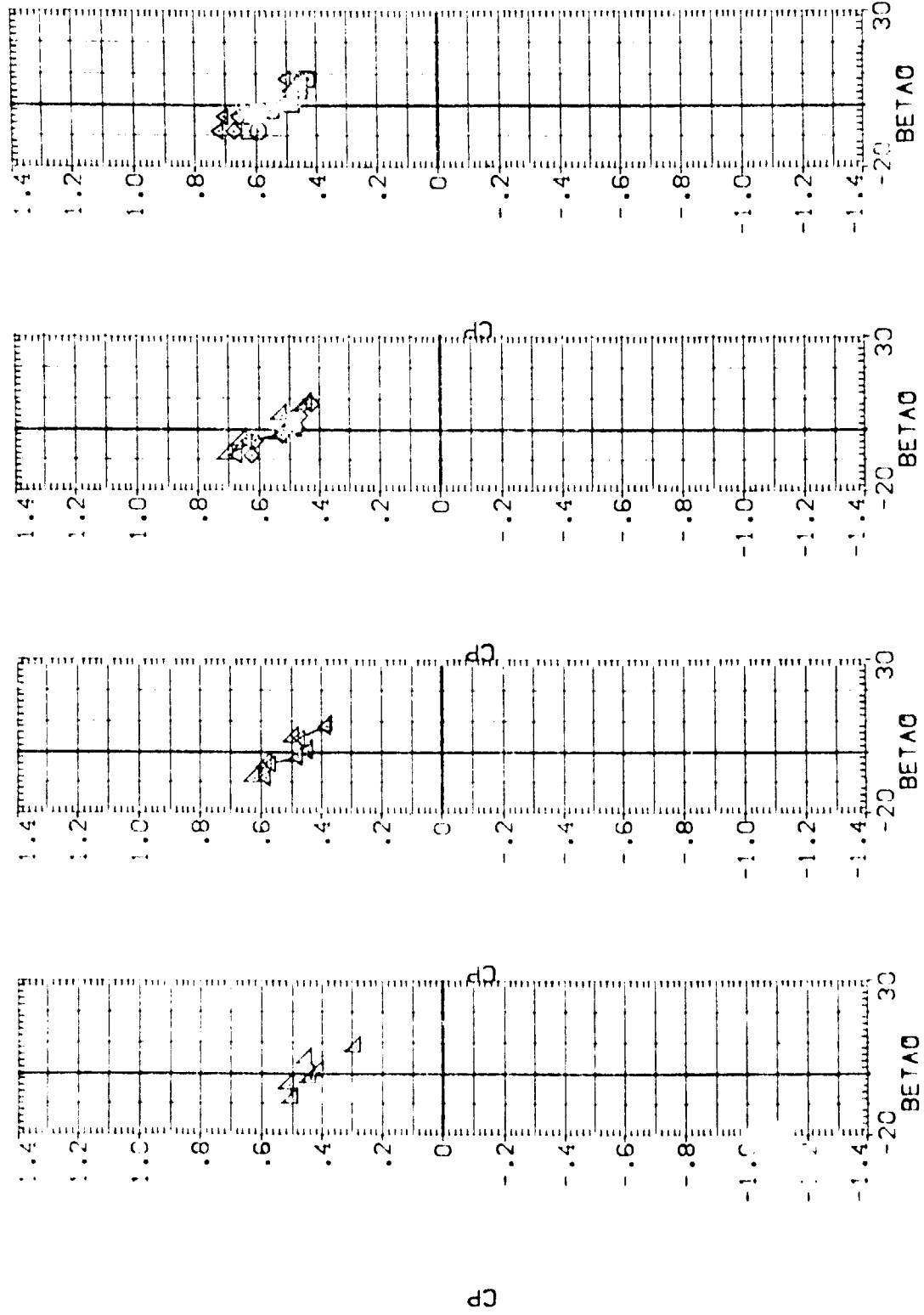
MACH
RUDDER

ALPHA
-1.760

A/LT

PHI
182.840
186.380
189.920
193.450
197.000

SYMBOL
010
010
010
010
010



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL

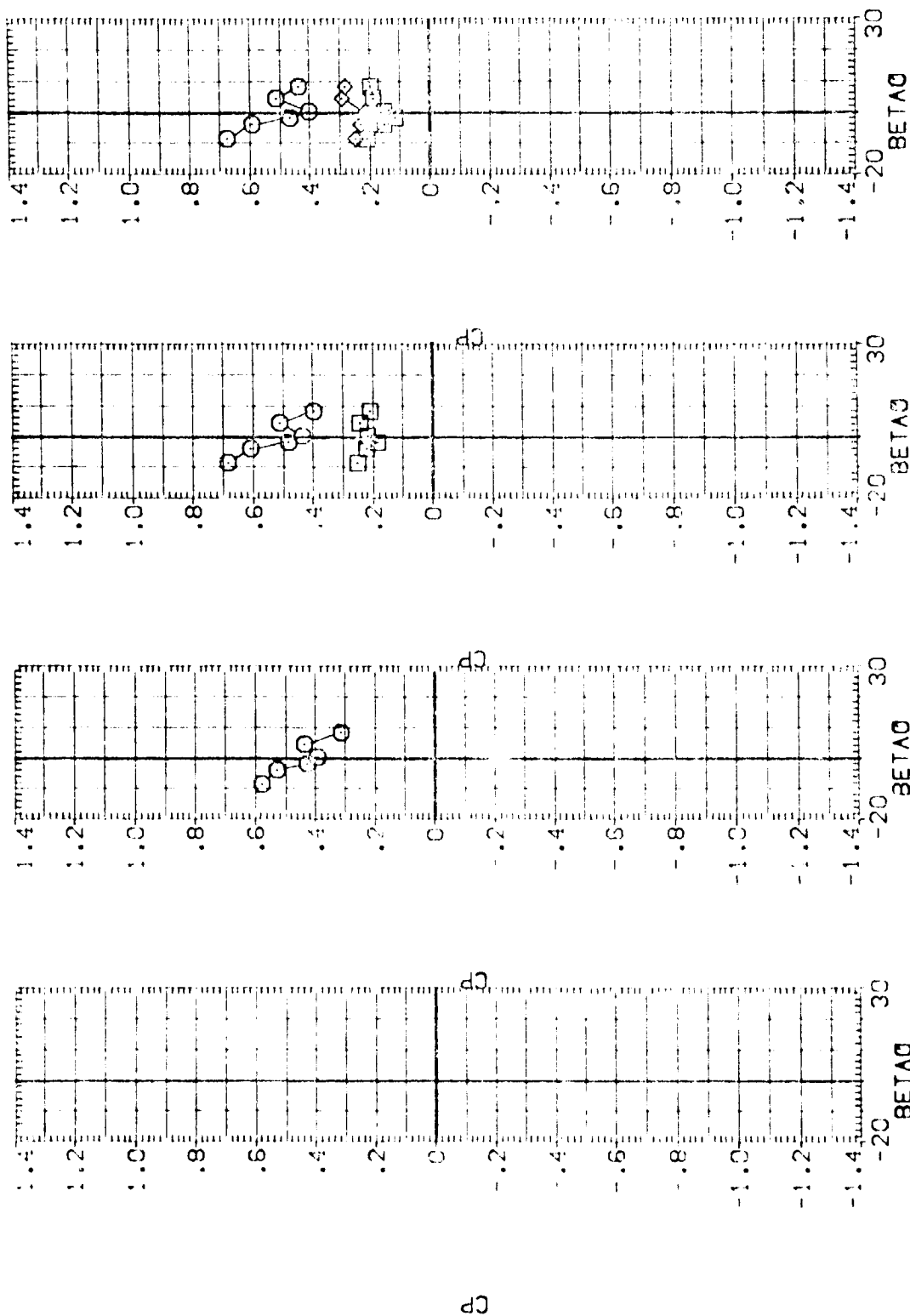
PHI
200.540
204.080
207.620
222.840
226.380

K/LT
.391
.397
.402
.408

ALPHA0
-.760

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOILER
1.000

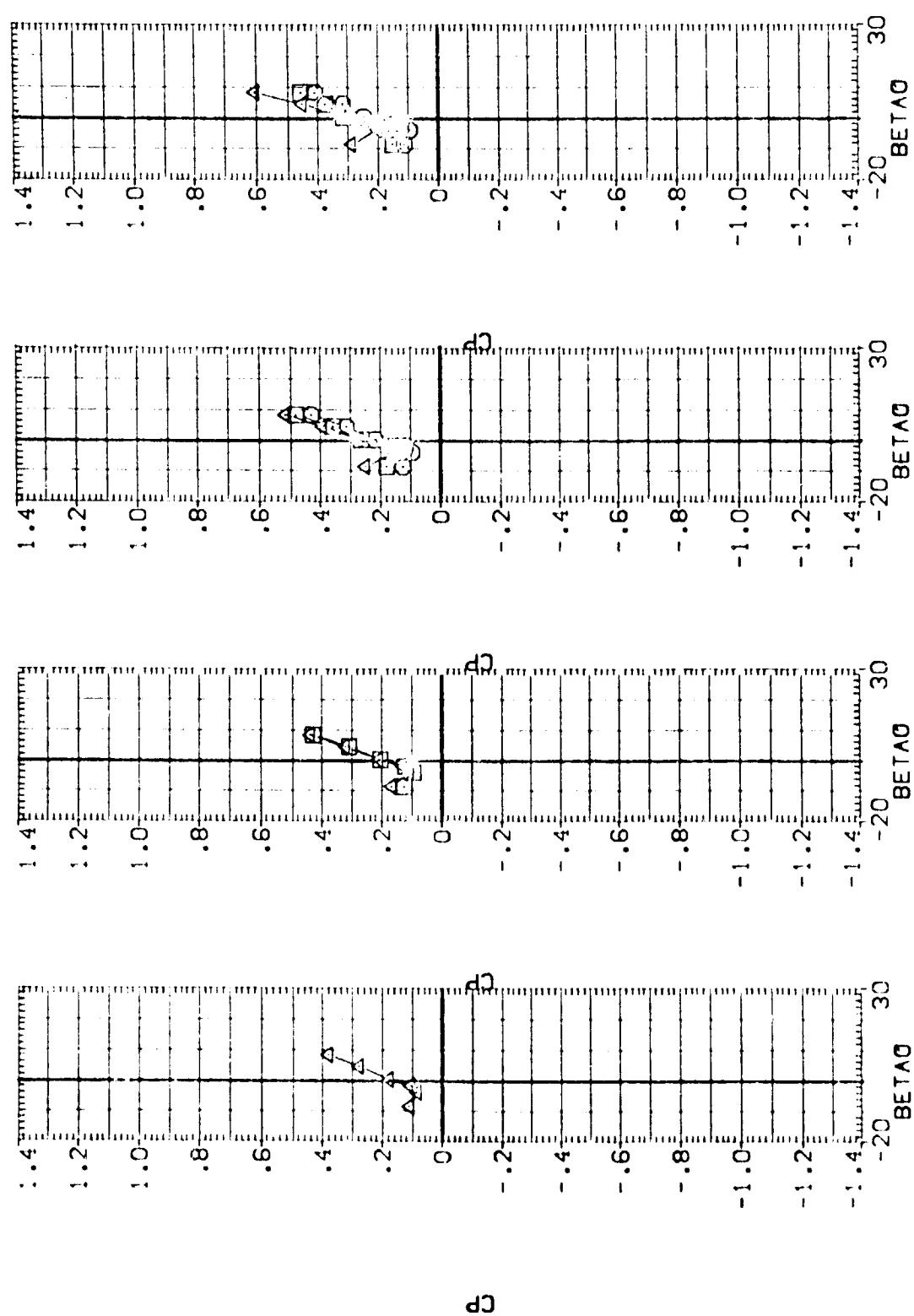
MACH
RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC:1-7:16 1A14 01+12+S:2N25+AT10 ET ATTACH PTS.(RB1233)

SYMBOL	RHI	X/Y	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	SPDRK
01	229.920	.807	-.760		1.250	.000
02	233.460	.812		RUDDER	.000	.000
03	234.040	.818				
04	237.000	.823				
05	237.580					



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC1:-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

SY-BOL

PHI

X/LT

ALPHA0

240.540
241.120
244.080
244.660
248.200

.807
.812
.818
.823

-.760

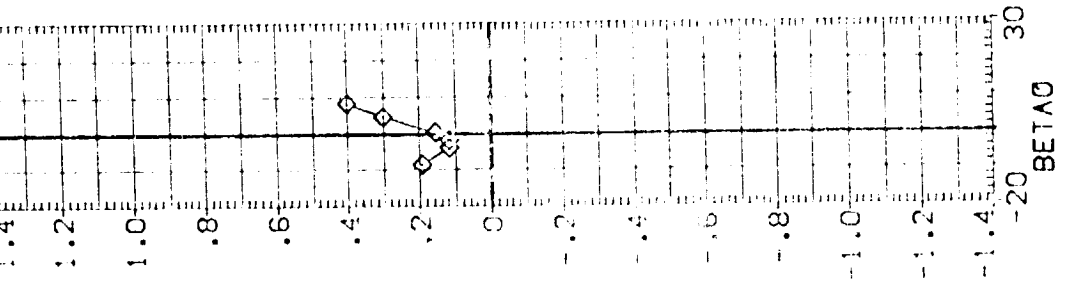
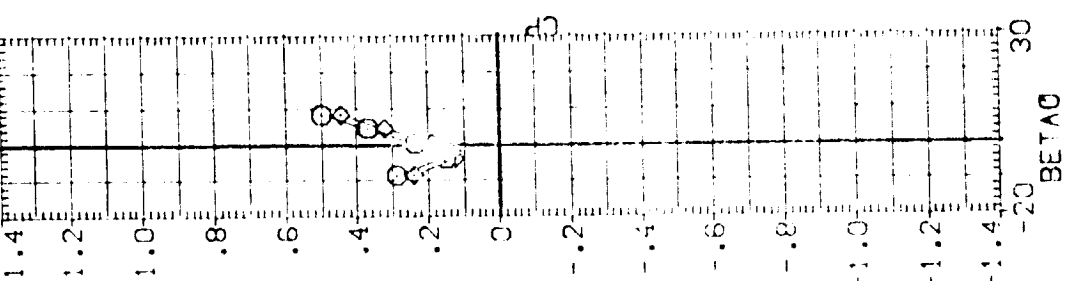
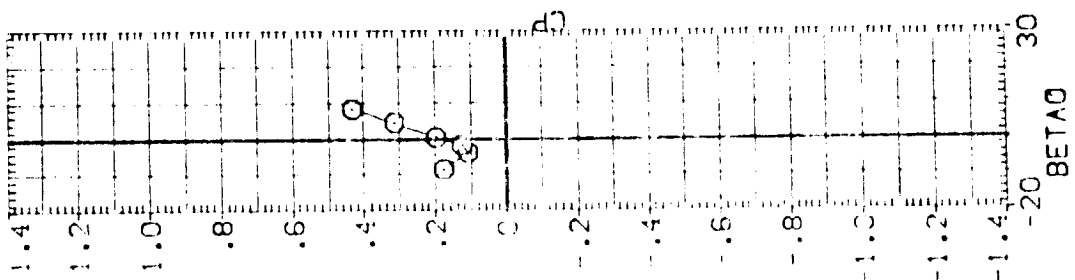
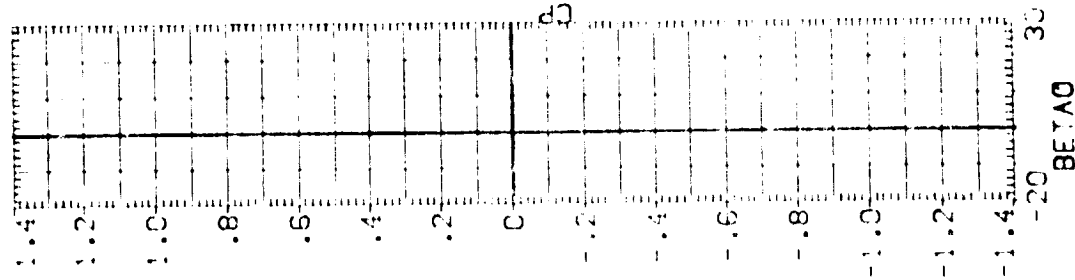
PARAMETRIC VALUES

1.250
.000

ELEVON
SPDRK

.000
.000

MACH
RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01-112+S12N25+A110 ET ATTACH PTS.(RB1233)

SYMBOL
O
□
△
▽

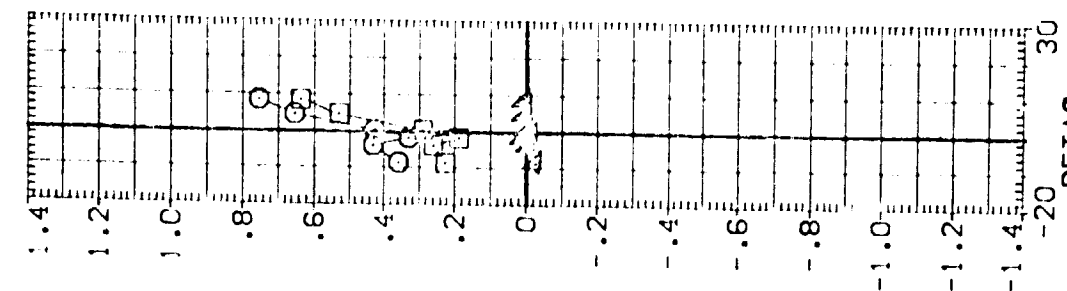
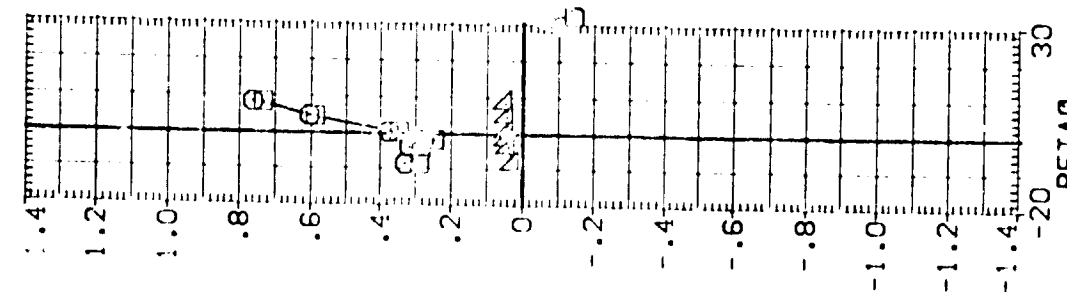
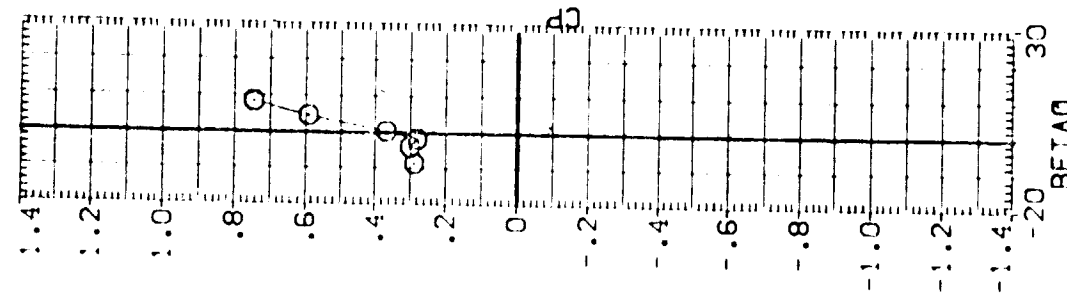
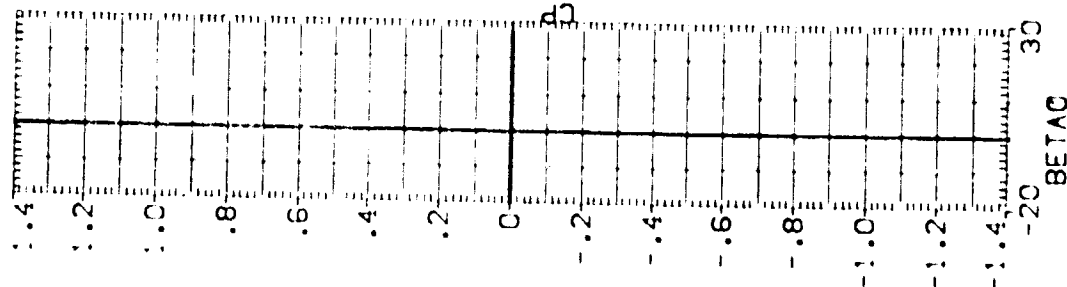
PHI
251.740
255.260
323.510
327.050
330.500

K/L
.916
.921
.927
.932

ALPHA
-1.780

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOON
.000

MACH
RUDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC:-716 1A14 01+T:2+S:2N25+AT10 ET ATTACH PTS.(RB1233)

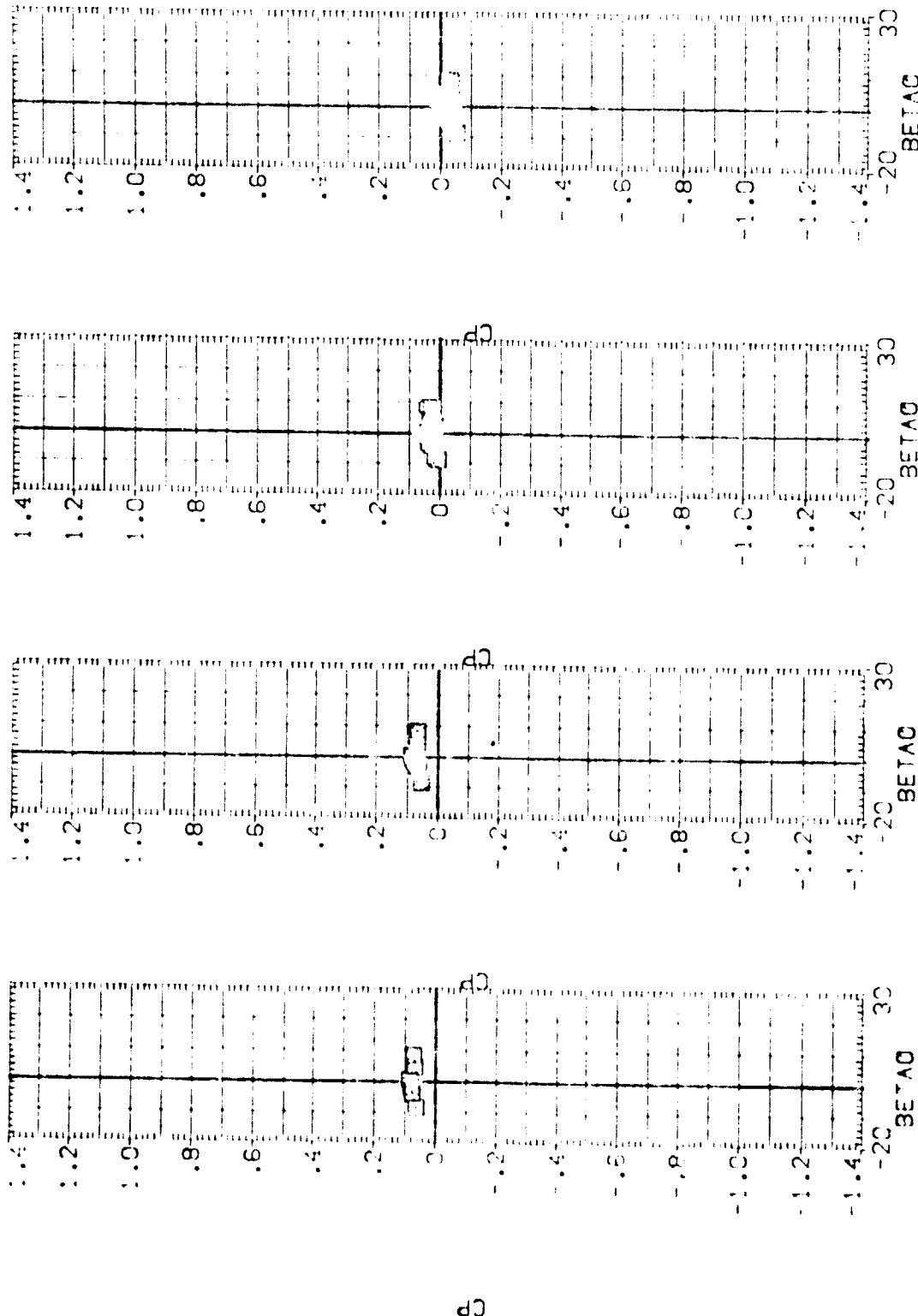
SYMBOL

PHI V/LT ALPHAB

PARAMETRIC VALUES

1.250 ELEVEN .000
1.000 SPGRW .000

MACH
RUDDER

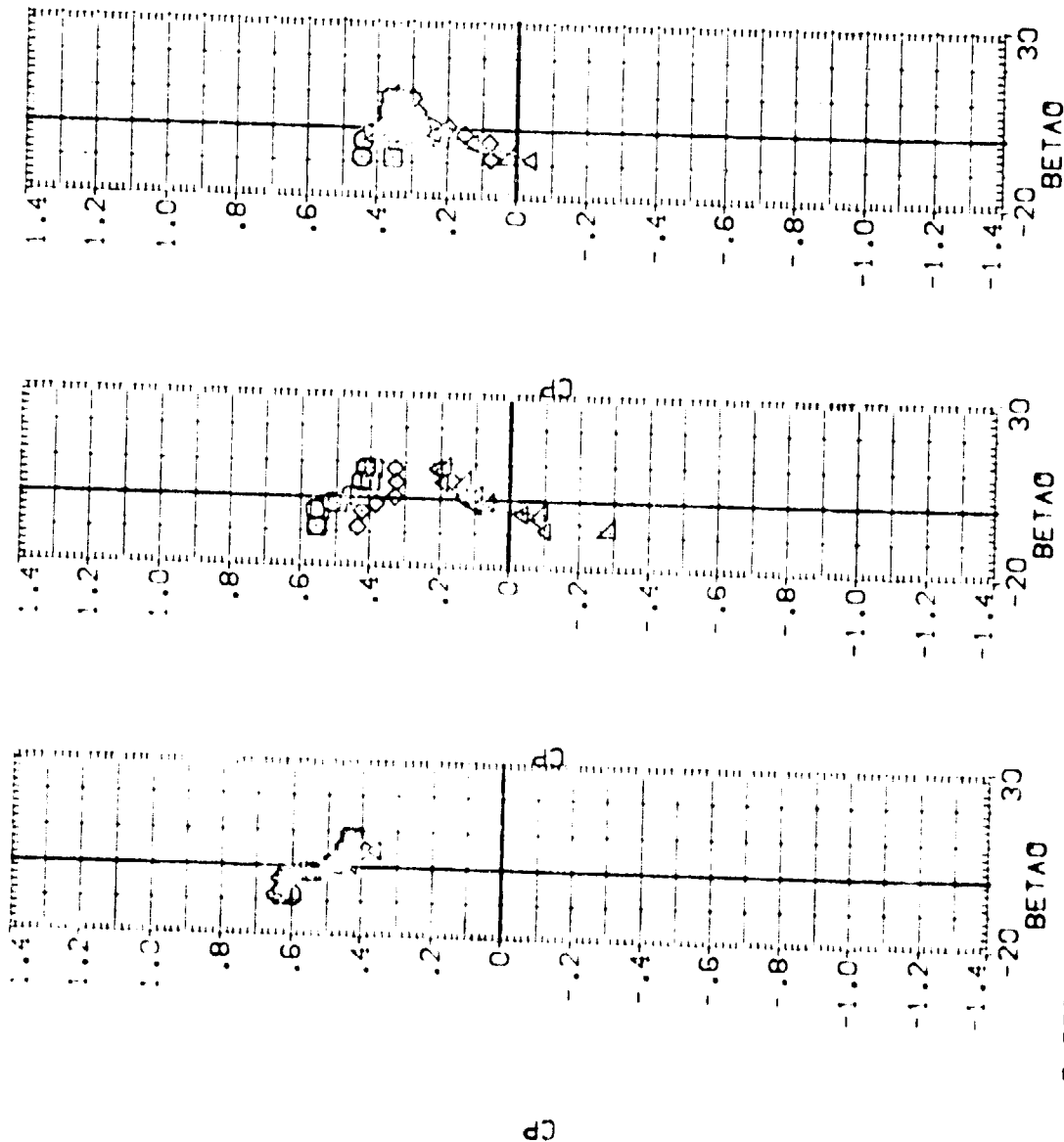


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-116 1A14 01+12+S12+25+AT10 ET ATTACH PTS. (R31233)

SYMBOL PHJ X/Y Z ALPHABETIC VALUES
 0 182.840 .413 .750
 1 86.380 .419
 2 89.920 .424
 3 93.460
 4 97.000

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPOILER .000



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A:4 01:12+S12N25+AT10 ET ATTACH PTS. (RB1233)

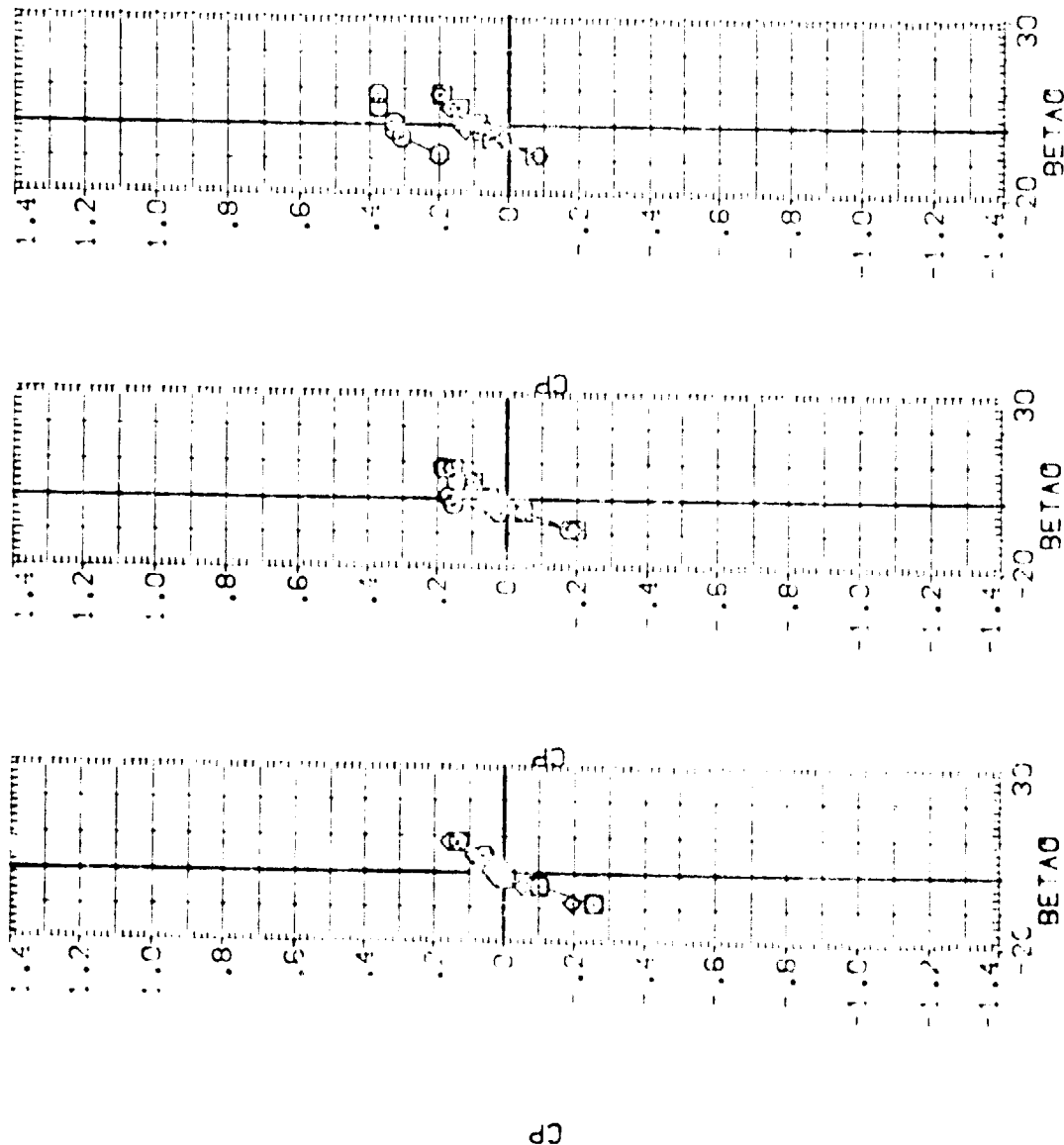
PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPDBRK
 .000

MACH
 RUDER

PHI
 X/LT
 ALPHA0

200.540
 204.080
 207.620
 222.840
 226.380

SYMBOL
 0 1 2 3 4 5

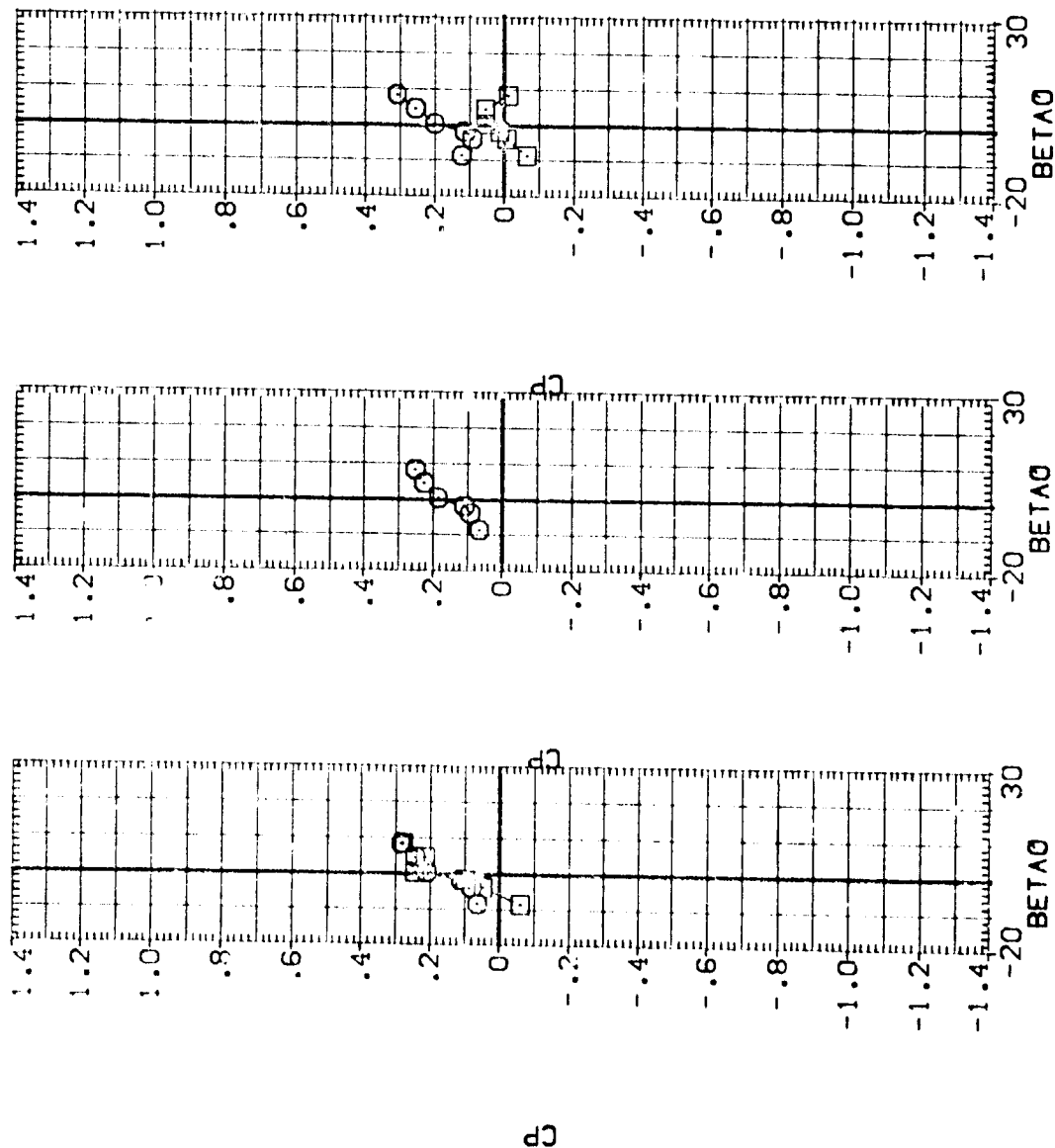


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBR
MACH
RUDDER

SYMBOL PHI X/LI ALPHAB
229.920 .828
233.460 .834
234.040 .839
237.000
237.560



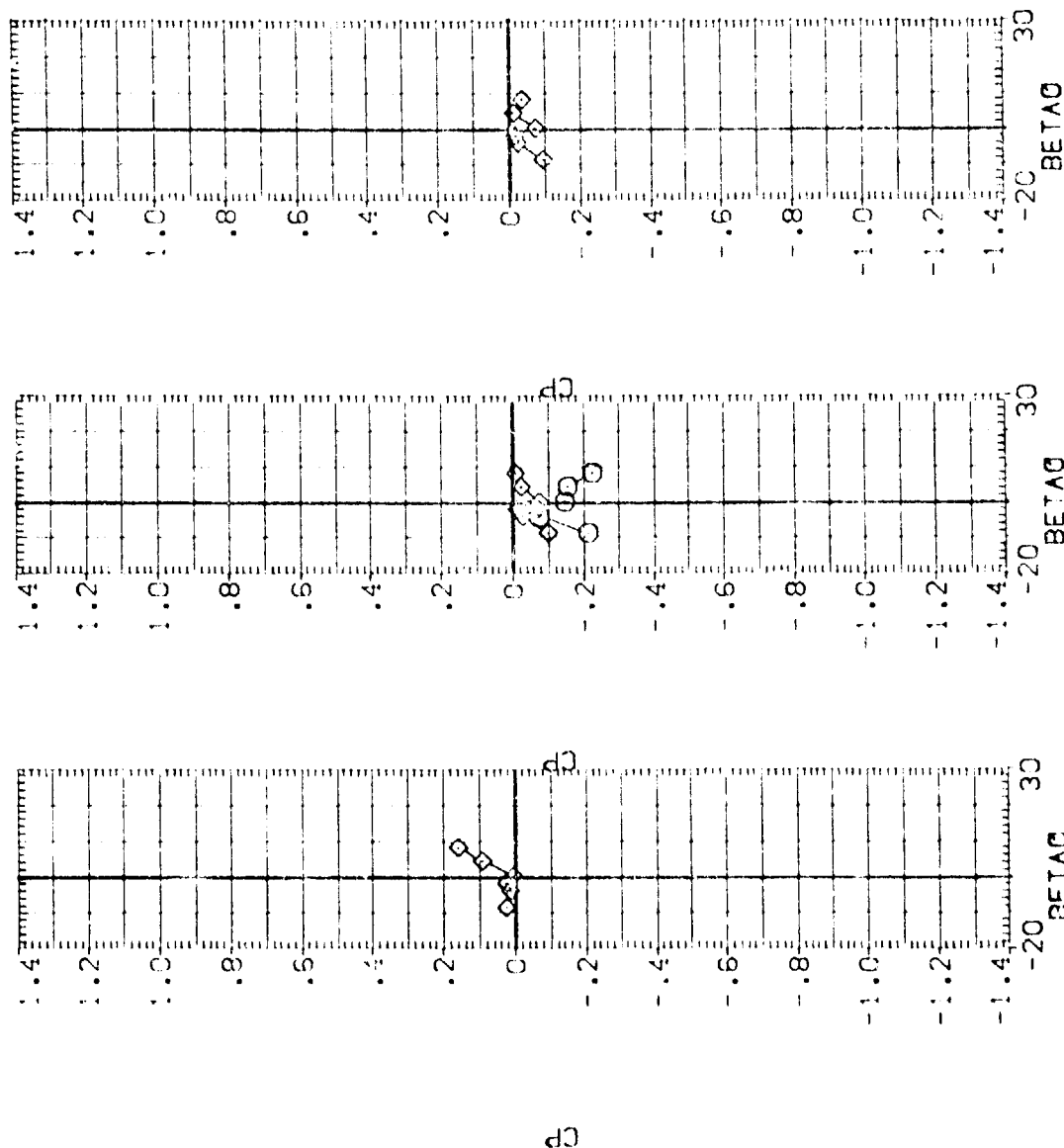
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOILER
MACH .000
RUDDER .000

SYMBOL PHI X/LT ALPHA0
240.540 .828 -.750
241.120 .834
244.080 .839
244.660
246.200

4.1



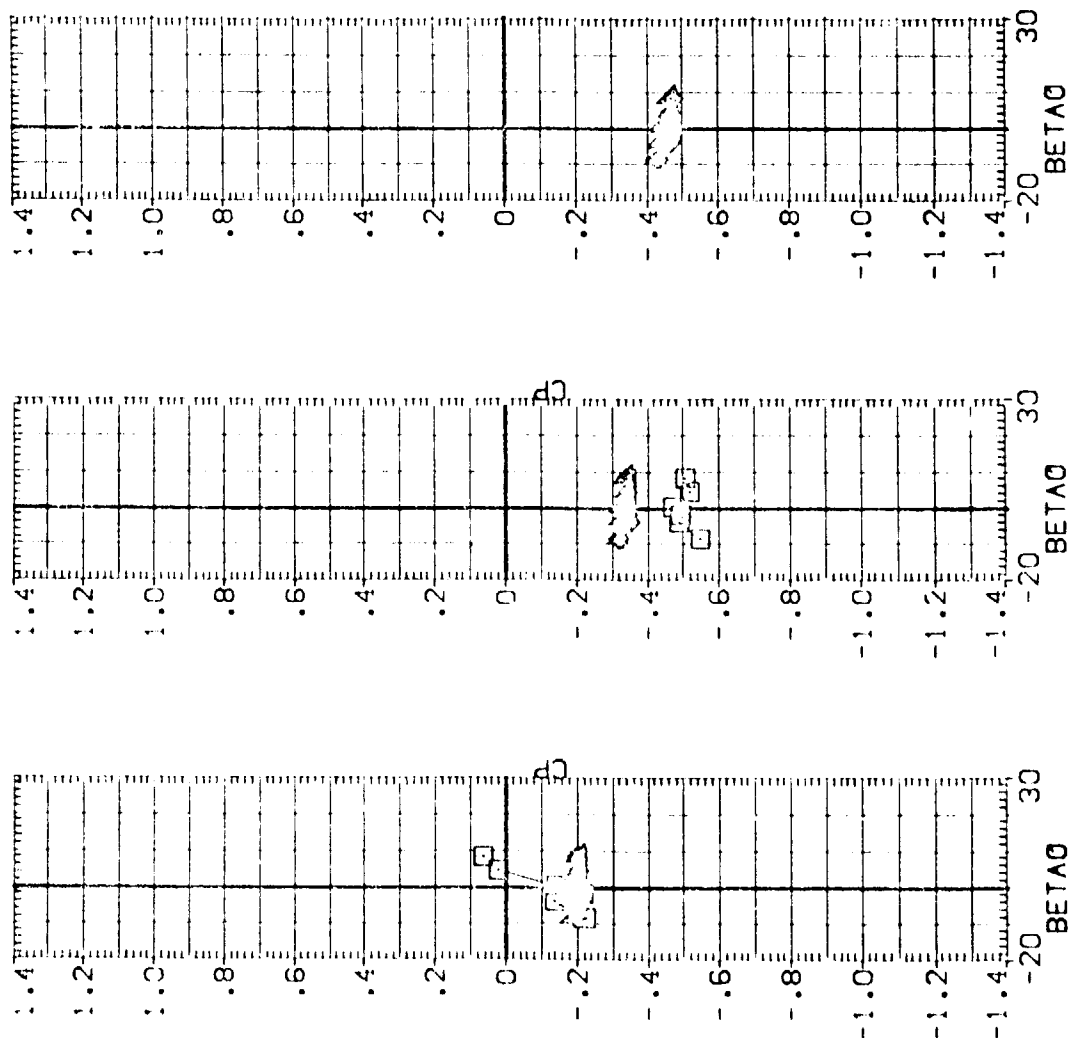
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOILER
 .000

MACH
 RUDDER

SYMBOL PHI X/LT ALPHA0
 251.740 .938
 255.280 .943
 323.510 .948
 327.050
 330.550



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

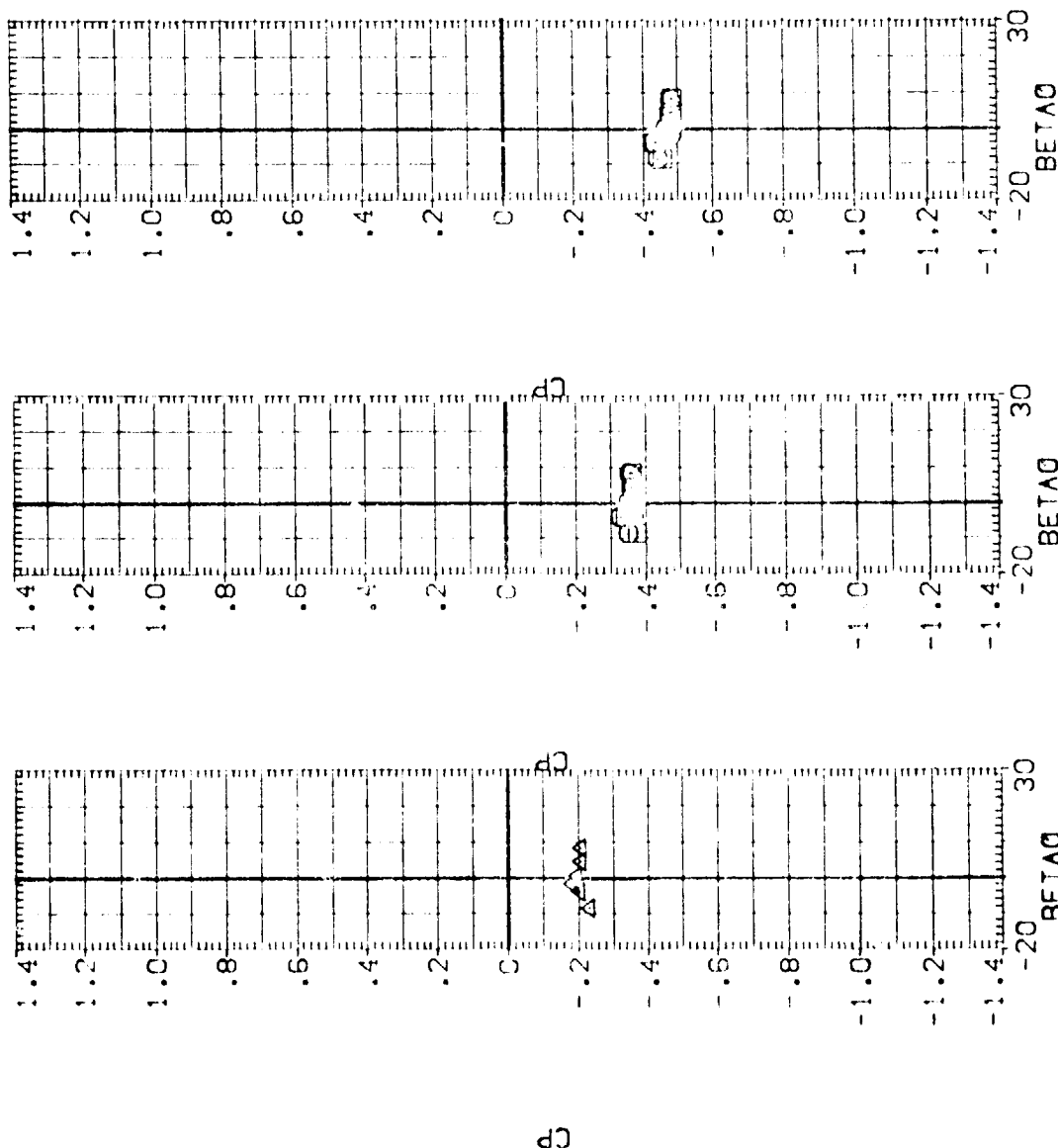
SYMBOL
 ○
 ◇
 △

PHI
 334.130
 337.570
 341.210
 344.750

X/LT
 .938
 .943
 .948

ALPHA
 -.760

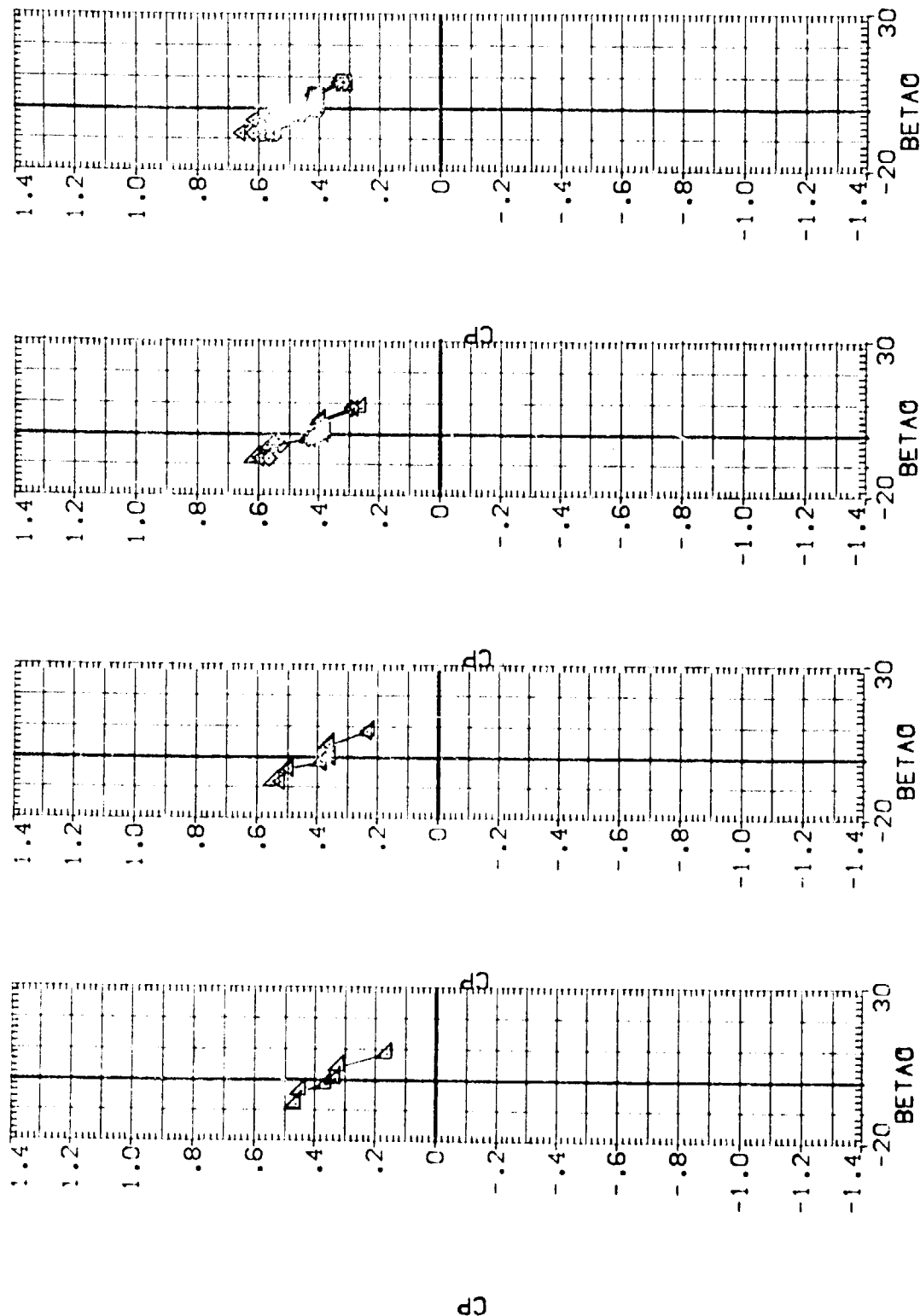
PARAMETRIC VALUES
 1.250
 .000
 ELEVON
 .000
 SPOBRK



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ET ATTACH PTS.(R31233)

SYMBOL	PHI	X/LT	ALPHA ⁰	PARAMETRIC VALUES		
				MACH	ELEV ⁰	SPOBRK
○	182.840	.391	4.300		.000	.000
◇	186.380	.397		RUDDER		
△	189.920	.402				
▽	193.460	.408				
□	197.000					



EXTERNAL TANK ATTACH POINTS PRESSURES

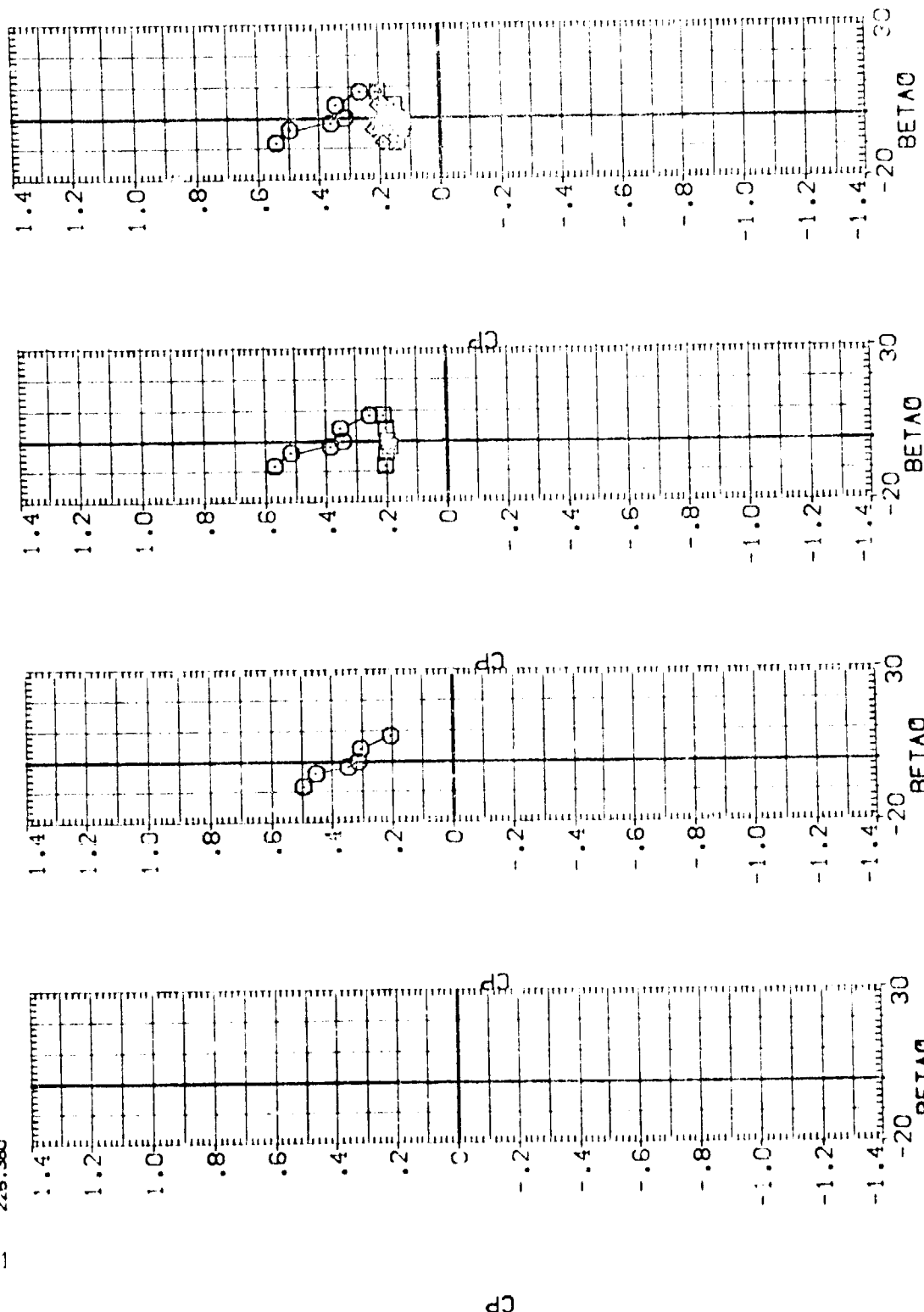
ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

SYMBOL
 O □ ◇ △

PHI X/LT ALPHA
 200.540 .391 4.300
 204.080 .397
 207.620 .402
 222.840 .408
 226.380

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOILER .000

MACH
 RUDDER

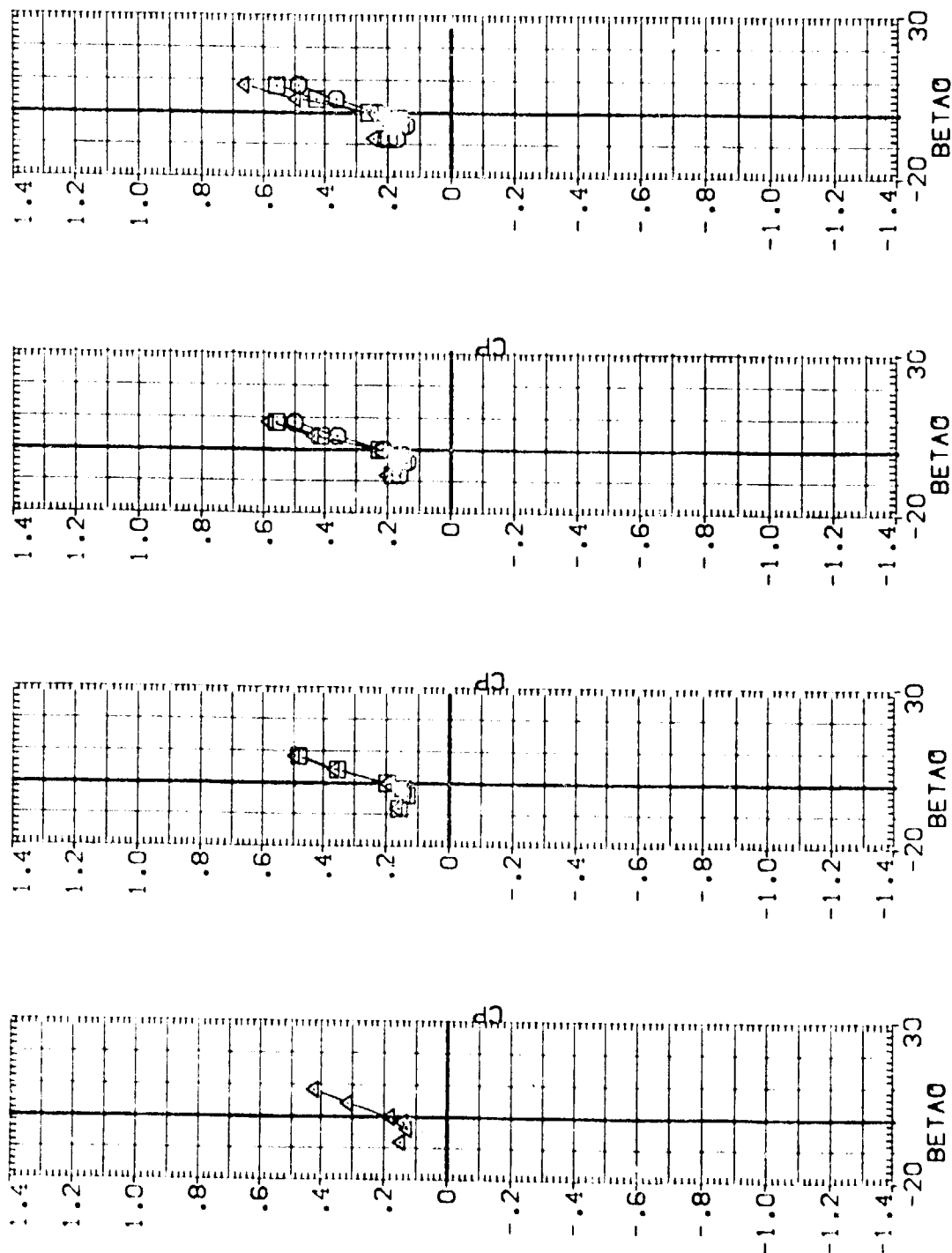


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-7:6 1A14 01+112+S12N25+AT10 ET ATTACH PTS.(R81233)

SYMBOL	PHI	X/LT	ALPHA	PARAMETRIC VALUES		
				1.250	ELEVON	.000
0	229.920	.807	4.300	.000	SPDRX	.000
1	233.460	.812				
2	234.040	.818				
3	237.000	.823				
4	237.500					

MACH
RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

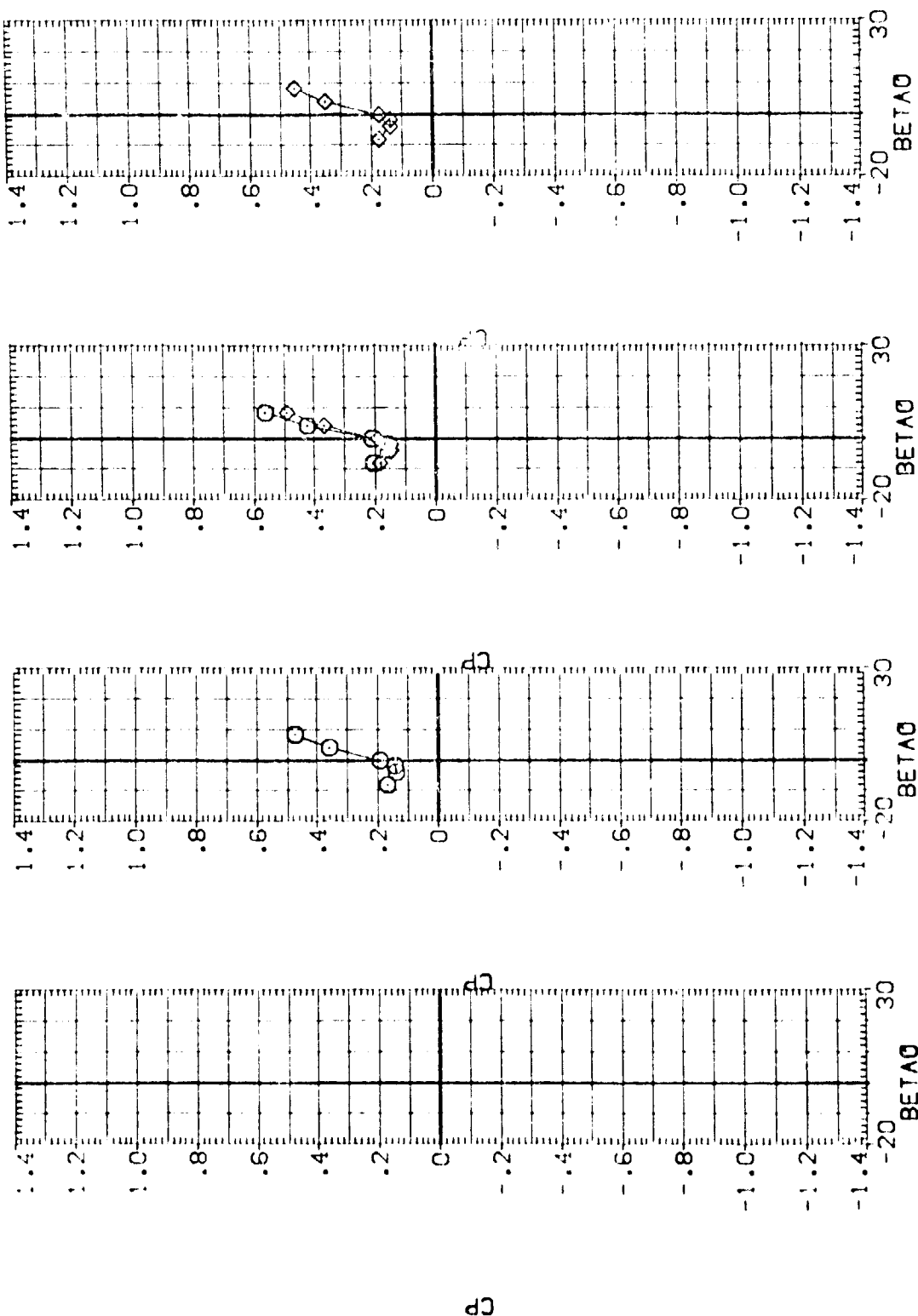
ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL
 O
 I
 ◇
 4
 1

PHI X/LT ALPHA
 240.540 .807 4.300
 241.120 .812
 244.080 .818
 244.660 .823
 248.200

PARAMETRIC VALUES
 1.250 ELEVON .000
 .000 SPOBRK .000

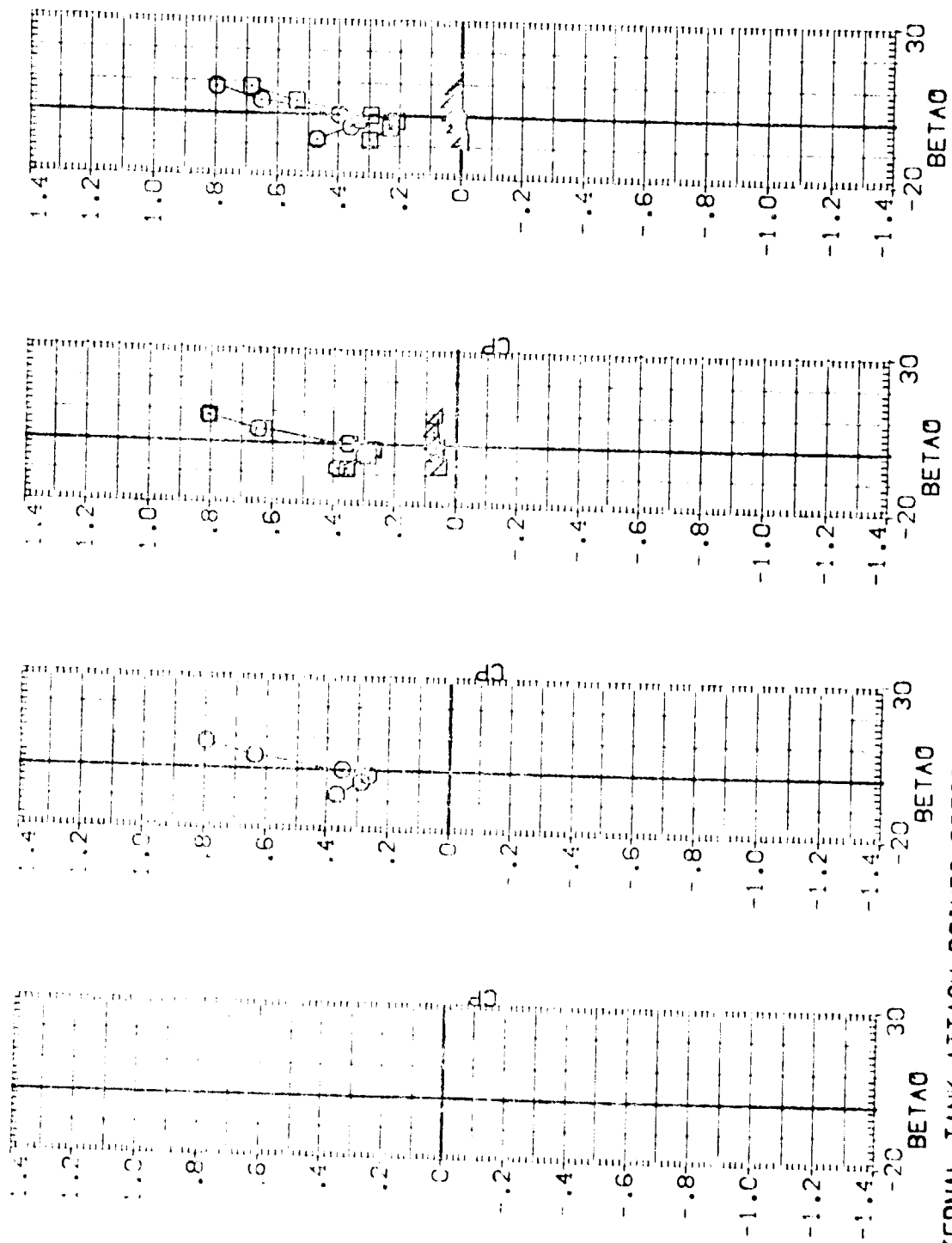
MACH
 RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC:1-7:6 1A:4 C1+12+S:2+25+AT10 ET ATTACH PTS.(RB1233)

SYNO	PUL	K/LT	A/PALG	PARAMETRIC VALUES		
				MACH	ELEVON	SPDBAK
25.1740	1.915	4.300		1.250	.000	.000
255.280	.921			.000	.000	.000
323.510	.920					
327.050	.921					
330.590						

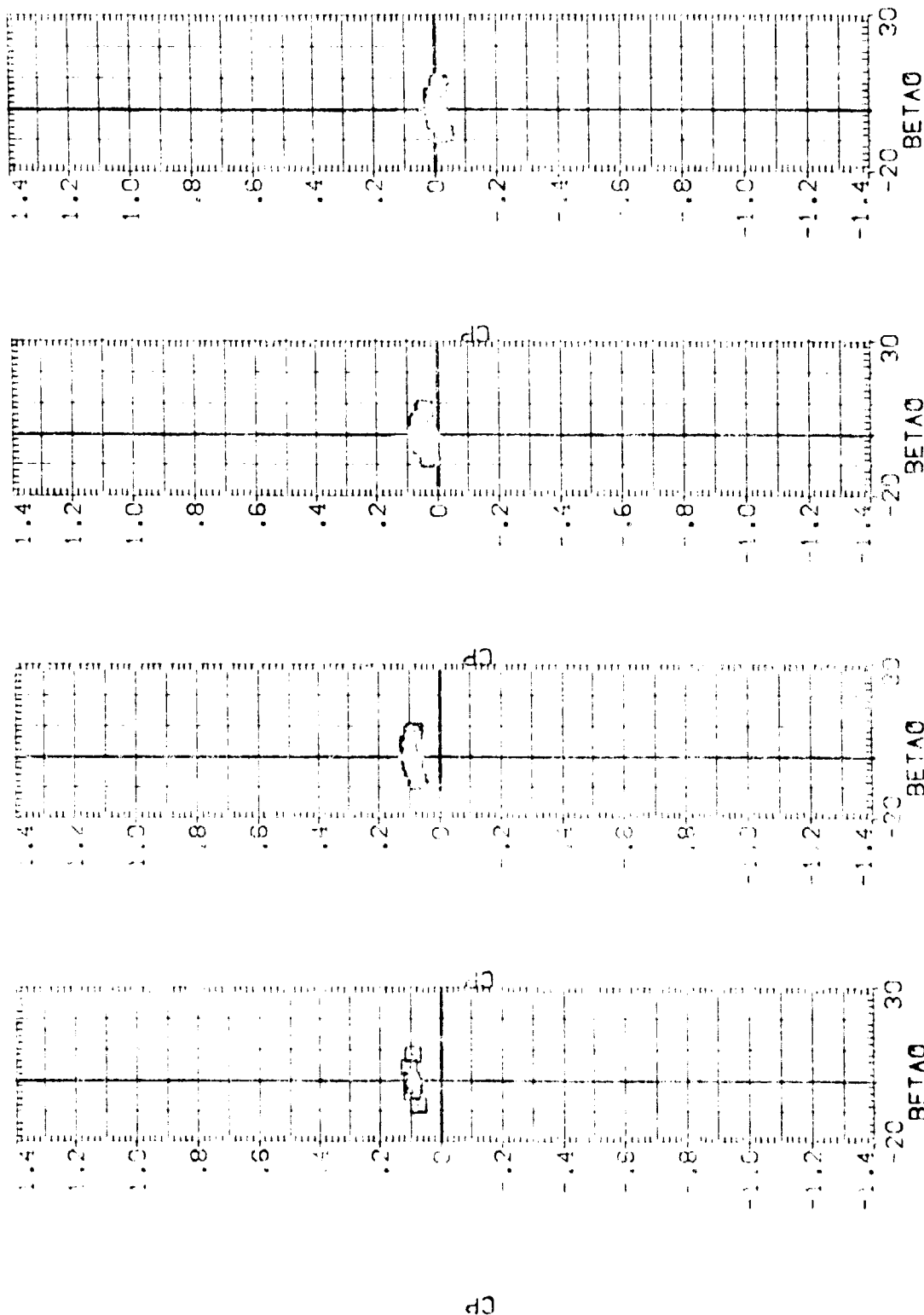


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
MACH 1.250 ELEVON .000
RUDDER .000 SPOILER .000

SYMBOL PH1 X/L ALP-A0
O 334.130 .916 4.300
X 337.670 .921
X 341.210 .927
X 344.750 .932



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+SLN25+AT10 ET ATTACH PTS. (RB1233)

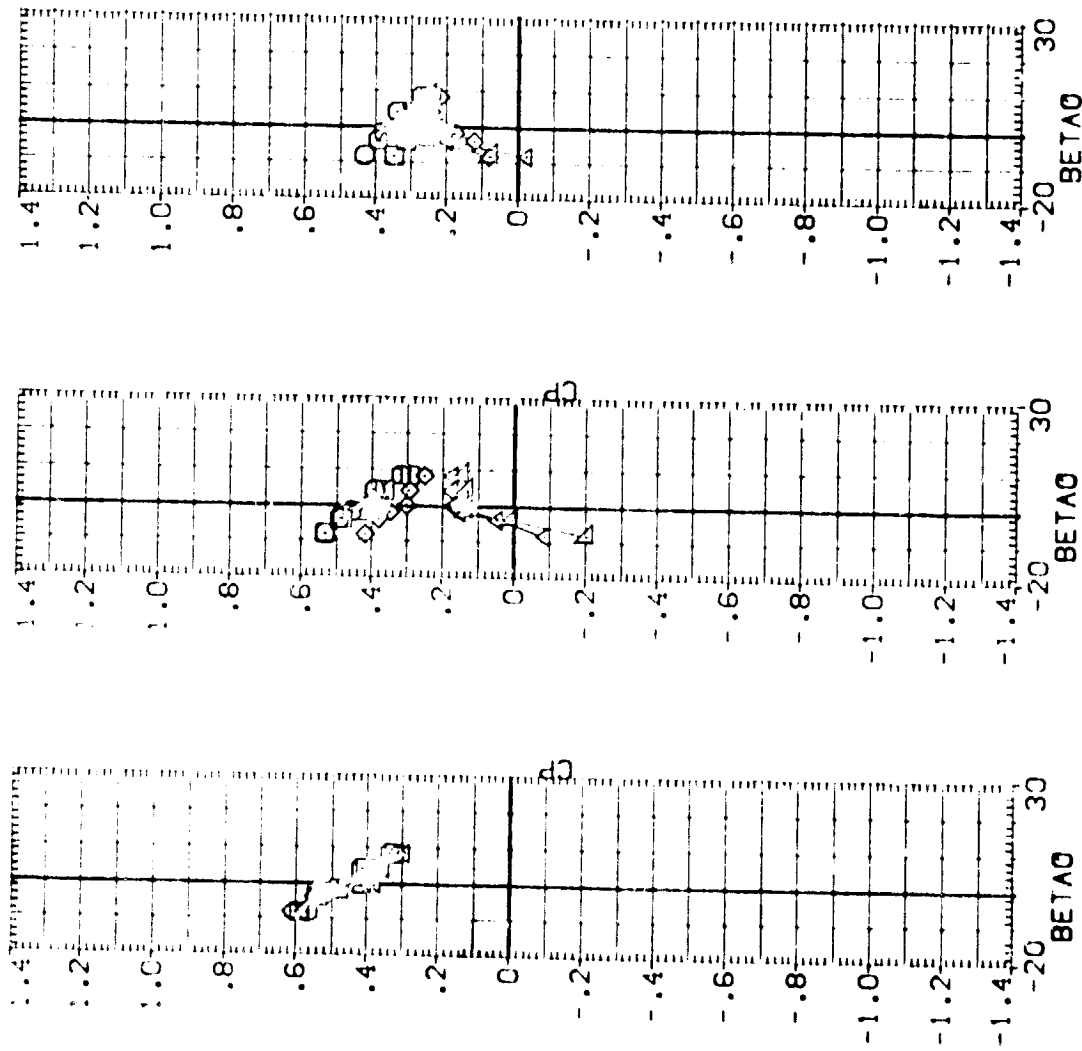
SR400

PHI
182.840
186.380
188.920
193.460
197.000

K/LT
.413
.419
.424

ALPHA
4.300

PARAMETRIC VALUES
MACH 1.250
ELEVON .000
RUDDER .000
SP050M .000



EXTERNAL TANK ATTACH POINTS PRESSURES

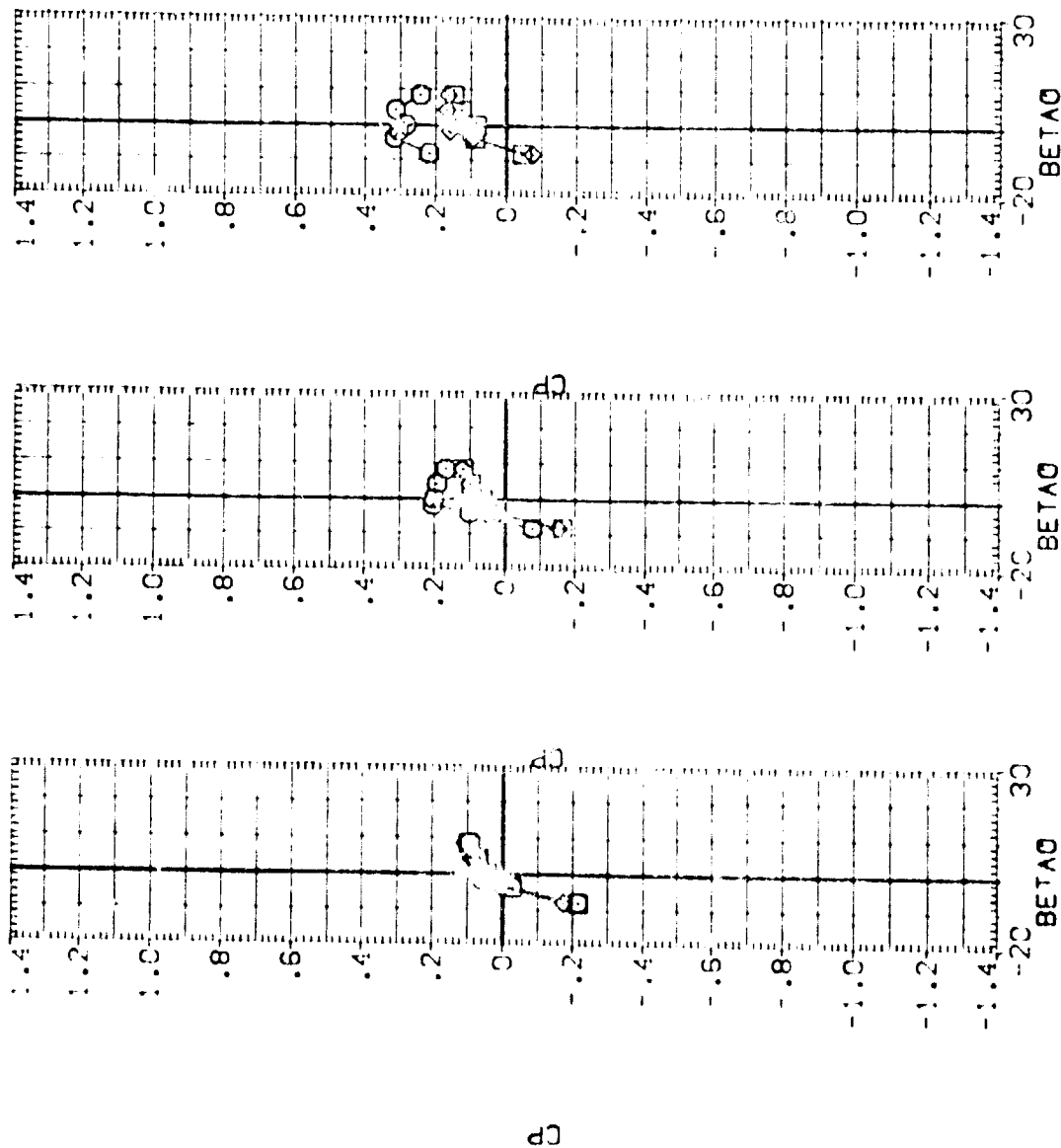
ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPEED
 .000

MACH
 RUDDER

ALPHA
 4.300
 .413
 .419
 .424

SYMBOL
 200.540
 204.080
 207.620
 222.840
 276.390



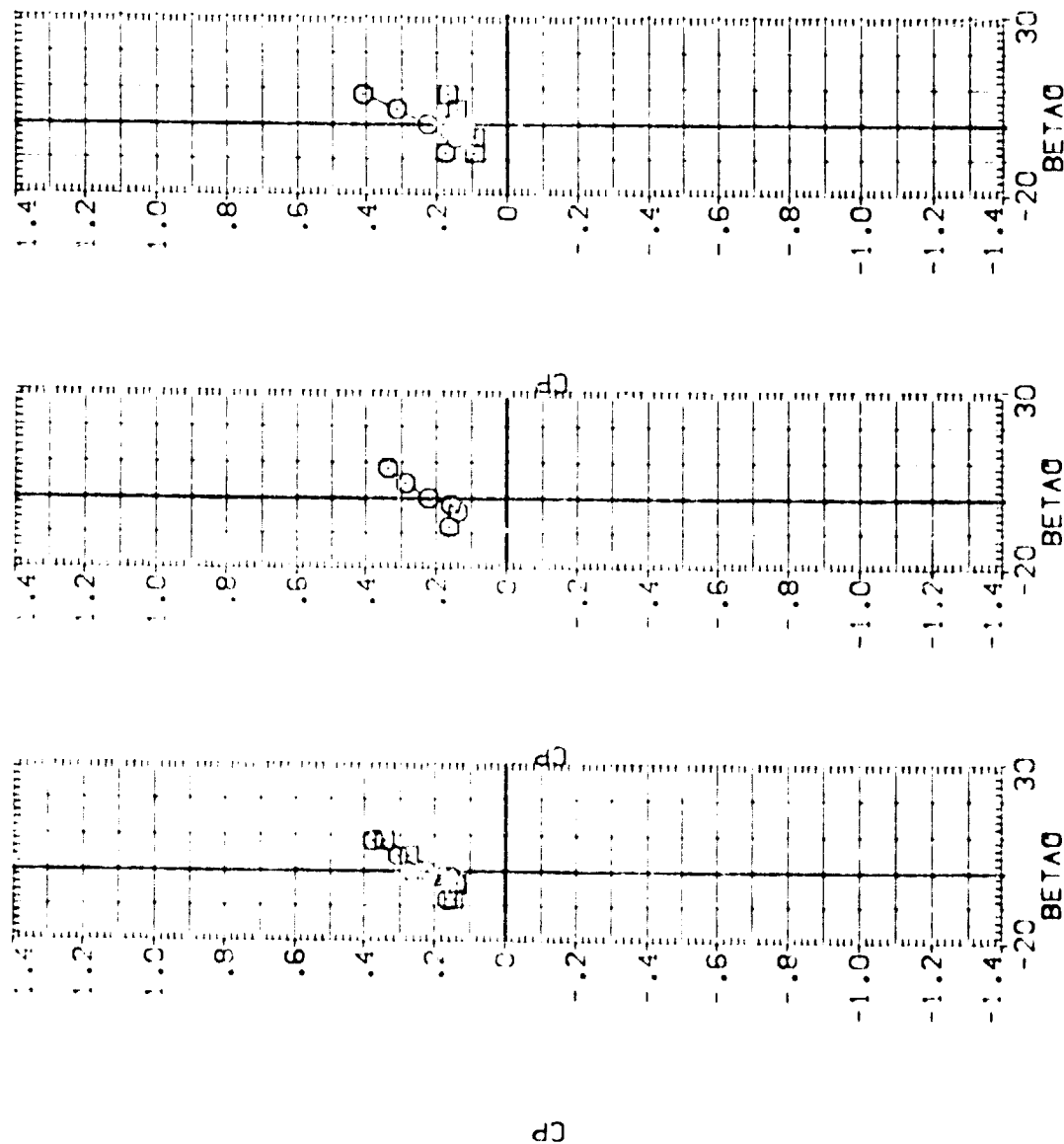
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-016 1A14 01+112+S12N25+AT10 ET ATTACH PTS.(R81233)

PARAMETRIC VALUES
1.250 ELEVON
.000 3PDBRK
MACH
RUDDER

SMALL
229.920
233.460
234.040
237.000
237.580

ALT
.828
.834
.839

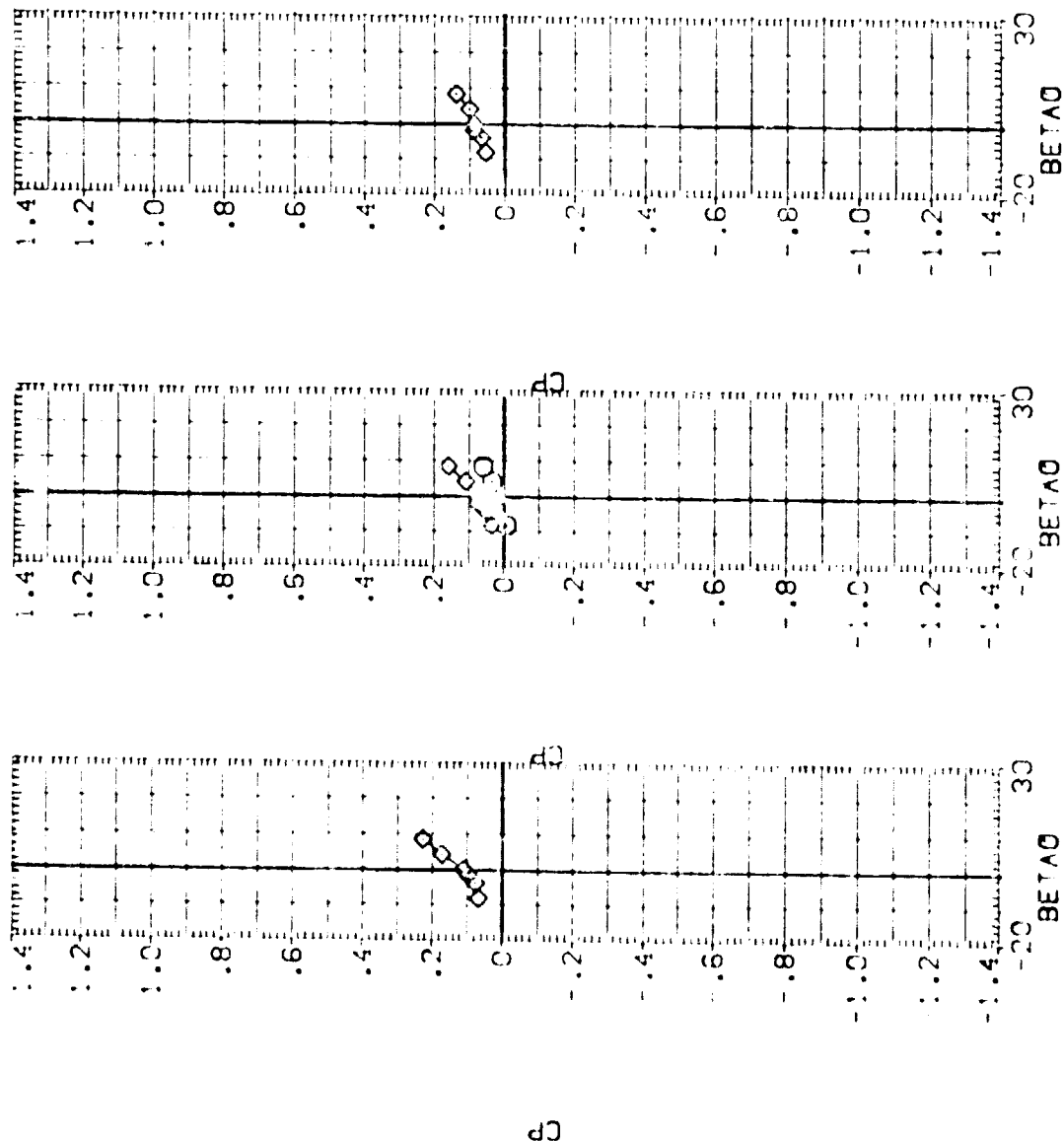


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 IF ATTACH PTS.(RB1233)

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOON
MACH
RUDDER

SYMBOL P-1 X/LT ALPHA0
240.540 .828 4.300
241.120 .834
244.080 .839
244.660
248.700



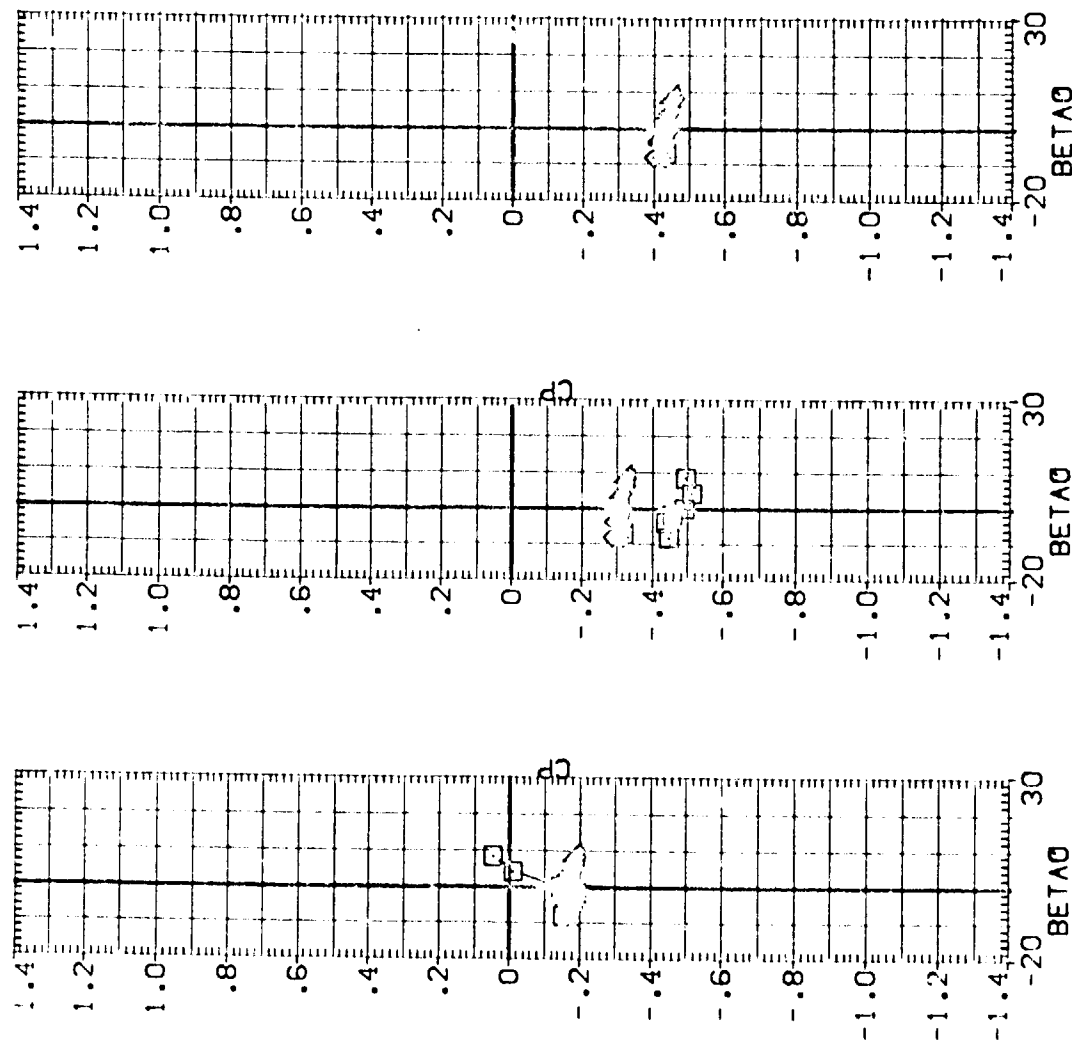
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 IA14 01+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

SYMBOL

PHI X/LT ALPHA0
 251.740 .938 4.300
 255.280 .943
 323.510 .948
 327.050
 330.500

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOBRK
 MACH
 RUDDER

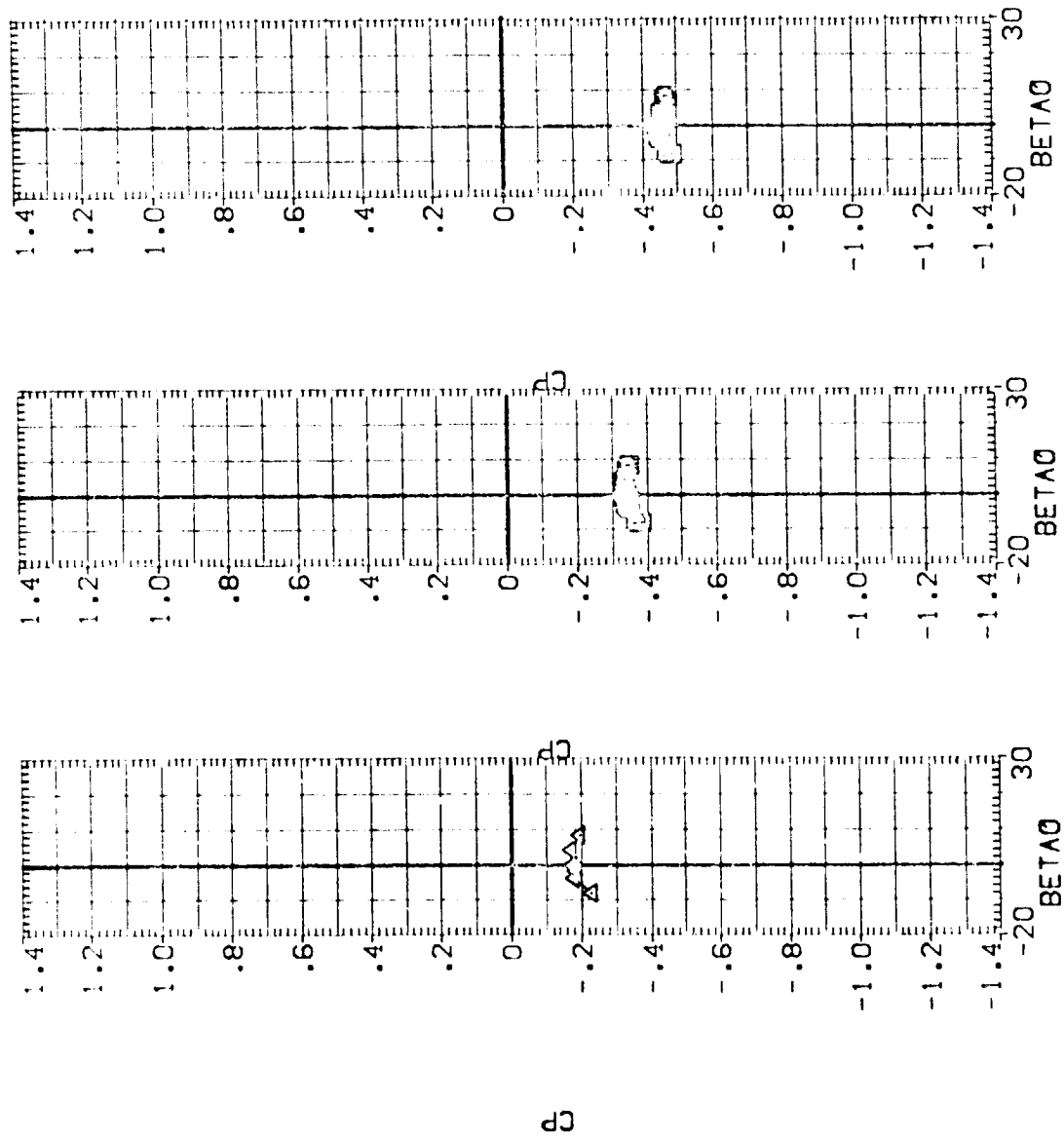


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 !A14 01+T12+S12N25+AT10 ET ATTACH PTS. (R01233)

PARAMETRIC VALUES
 MACH 1.250
 ELEVON .000
 RUDDER .000

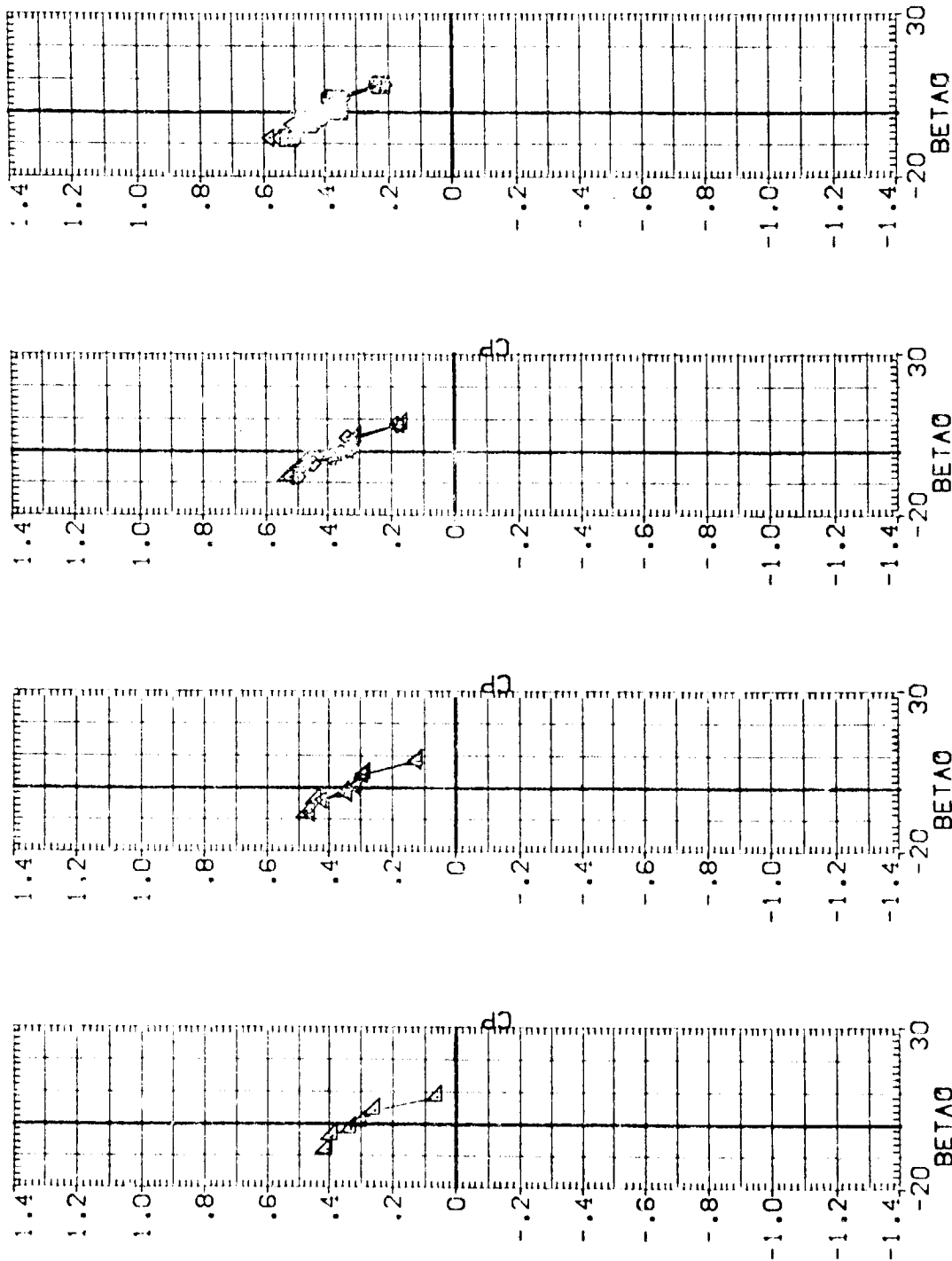
SYMBOL PHI X/LT ALPHA0
 334.130 .939 4.300
 337.670 .943
 341.210 .948
 344.750



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 IA14 01+12+S12N25+AT10 ET ATTACH PTS.(RB1233)

SYMBOL	PHI	X/LT	ALPHA	PARAMETRIC VALUES		
				MACH	ELEVON	
○	182.840	.391	7.910	RUDDER	.000	.000
□	186.380	.387				
◇	189.920	.402				
△	193.460	.438				
4.1	197.000					



EXTERNAL TANK ATTACH POINTS PRESSURES

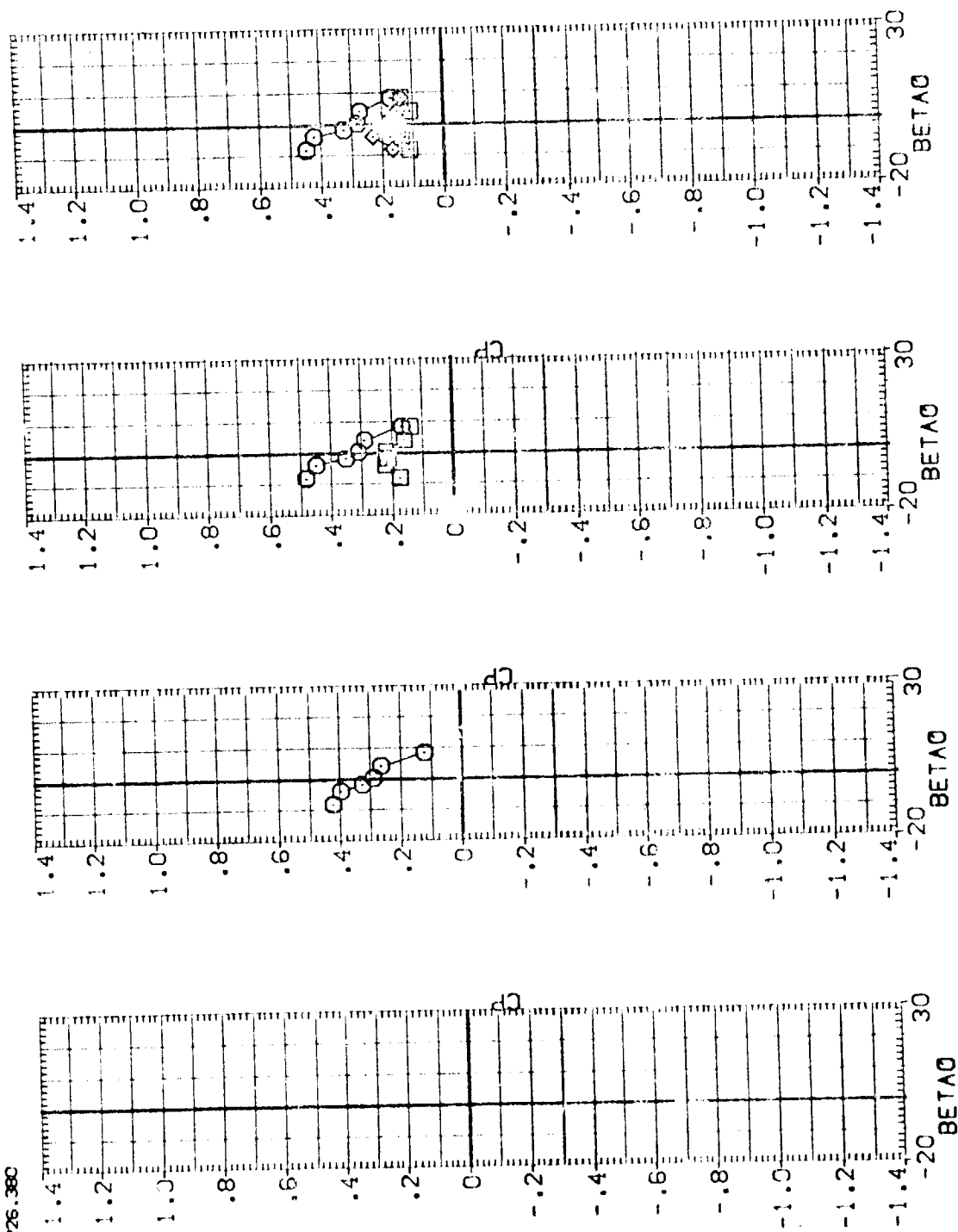
ARC11-716 IA14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL
011044

PHI	X/LT	ALPHA
200.540	.391	7.910
204.080	.397	
207.620	.402	
222.840	.408	
226.380		

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOBRK

MACH
RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

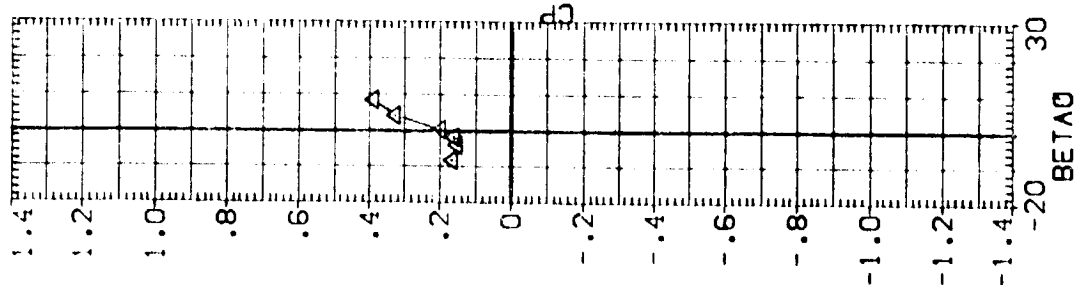
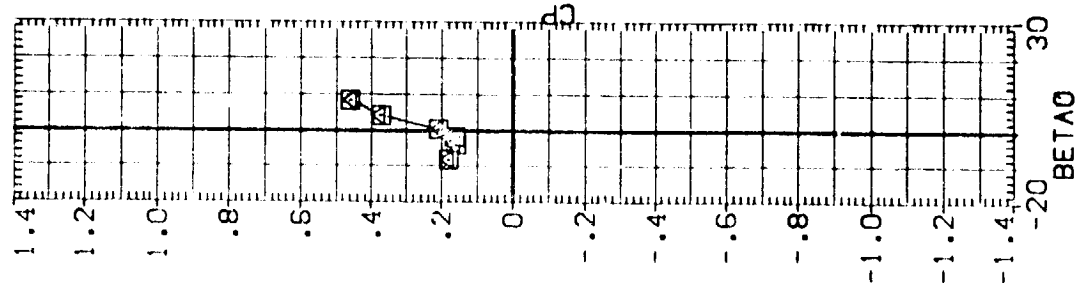
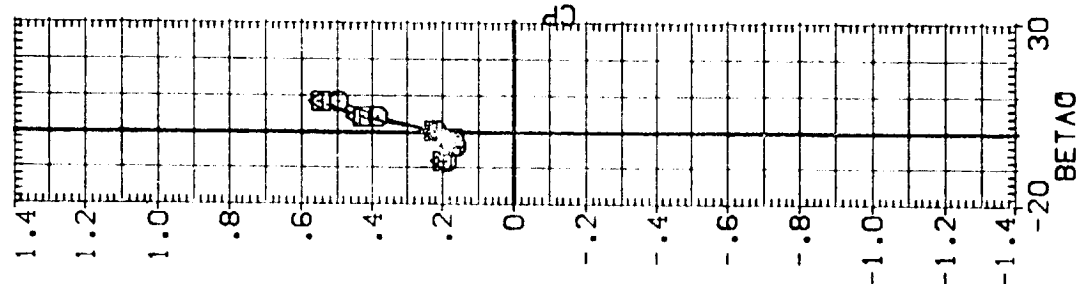
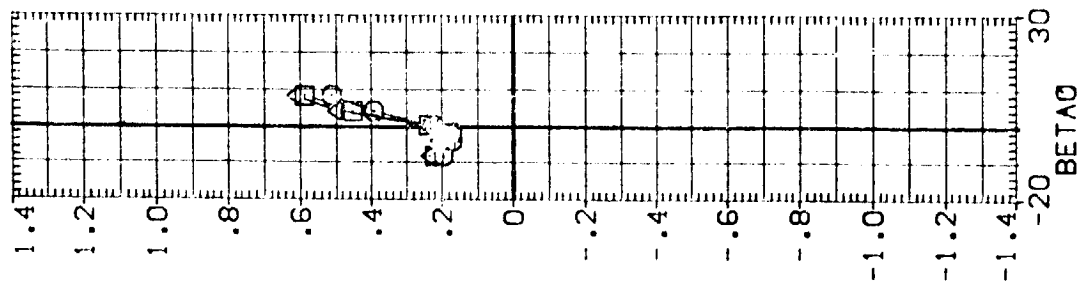
PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOBRK .000

MACH
RUDDER

ALPHAQ
7.910

X/LT
.807
.812
.818
.823

PHI
229.920
233.160
234.040
237.000
237.580



EXTERNAL TANK ATTACH POINTS PRESSURES

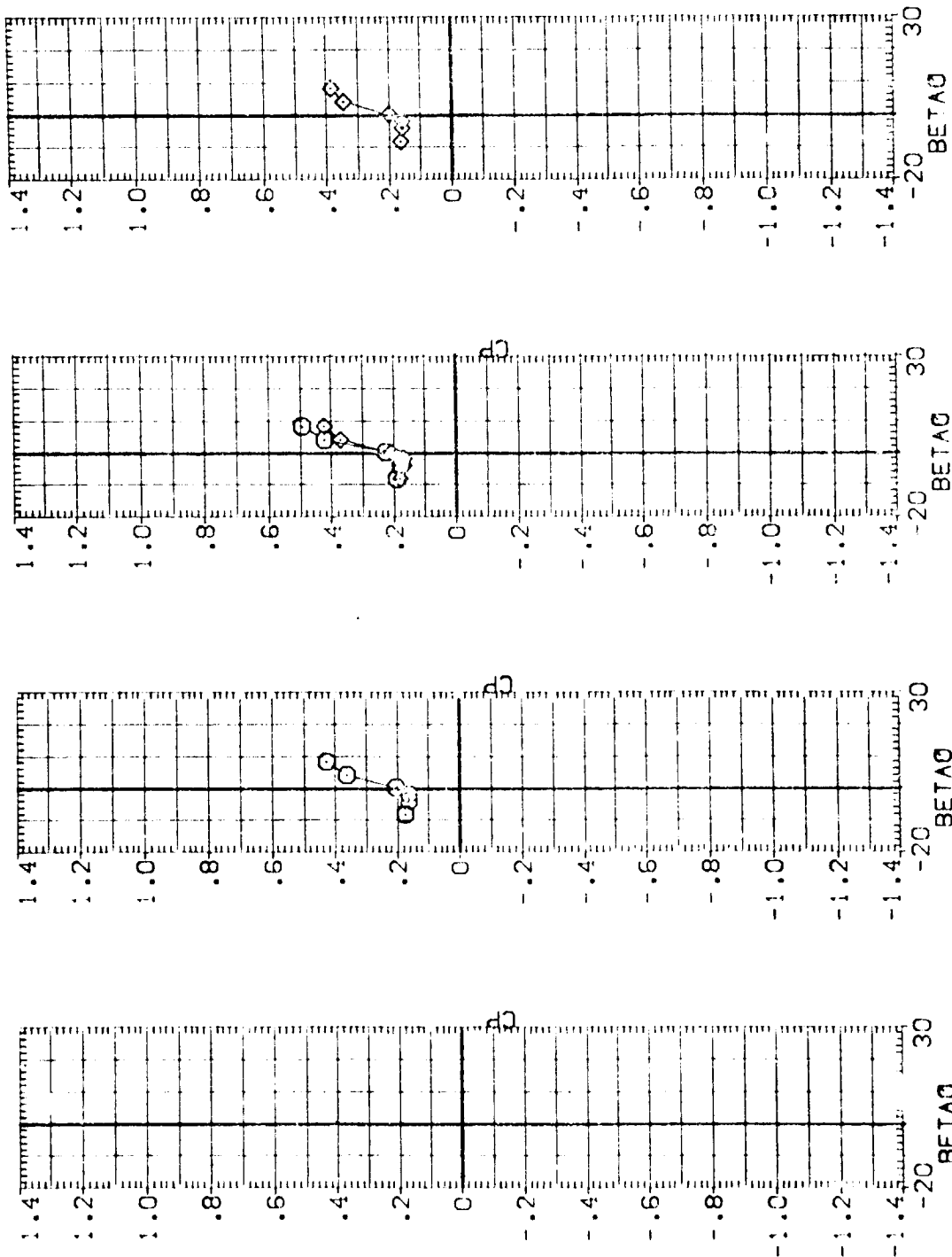
ARC11-716 IA14 01+T12+S12N25+A110 ET ATTACH PTS.(RB1233)

SYMBOL
O
◇
△

PHI X/LT ALPHA C
240.540 .807 7.910
241.120 .812
244.080 .818
244.680 .823
248.200

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOILER .000

MACH
RUDDER



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

SYMBOL

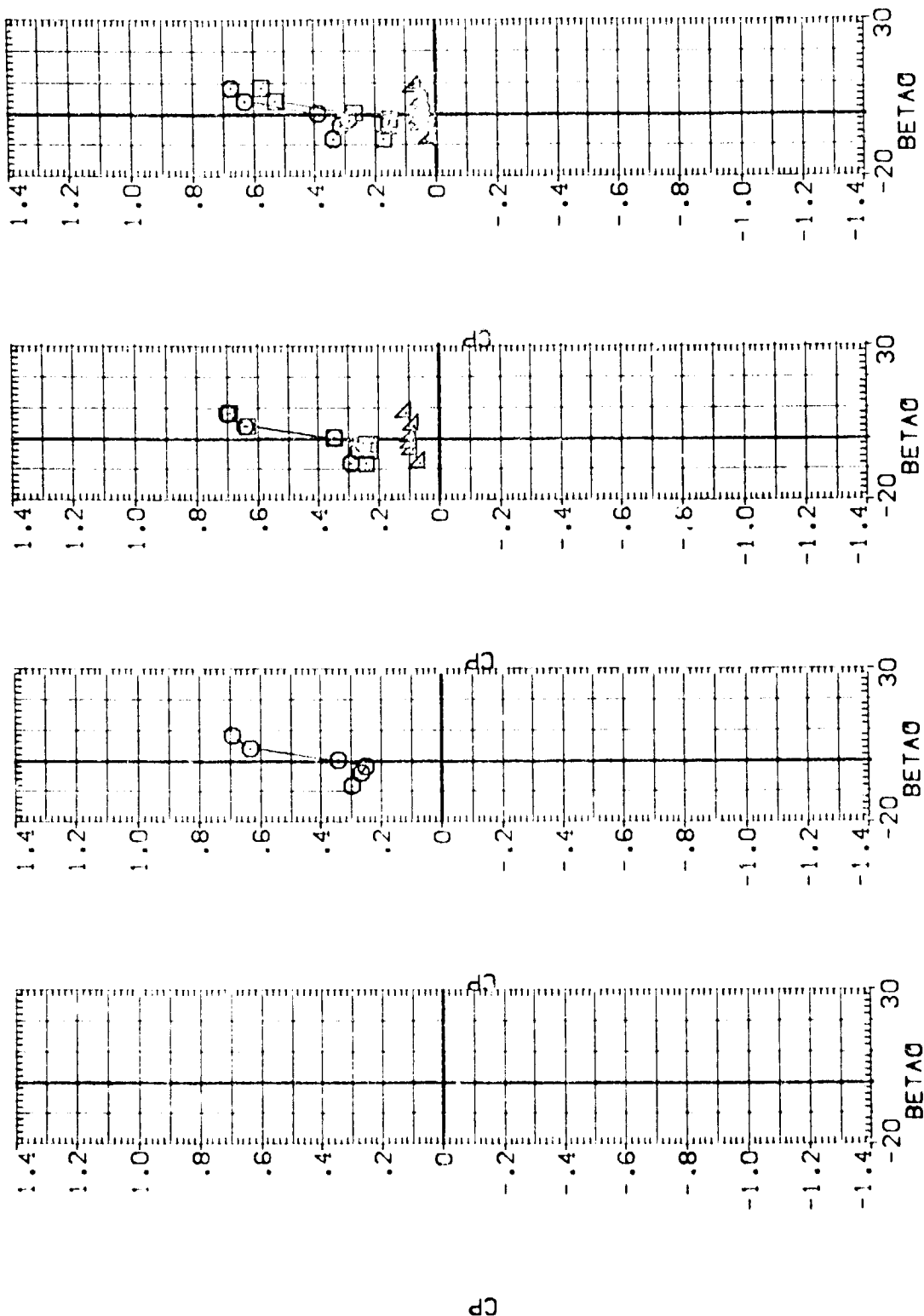
PHI
251.740
255.280
323.510
327.050
330.590

X/LT
.916
.921
.927
.932

ALPHA0
7.910

PARAMETRIC VALUES
1.250 ELEVON .000
.000 SPOSRK .000

MACH
RUDDER

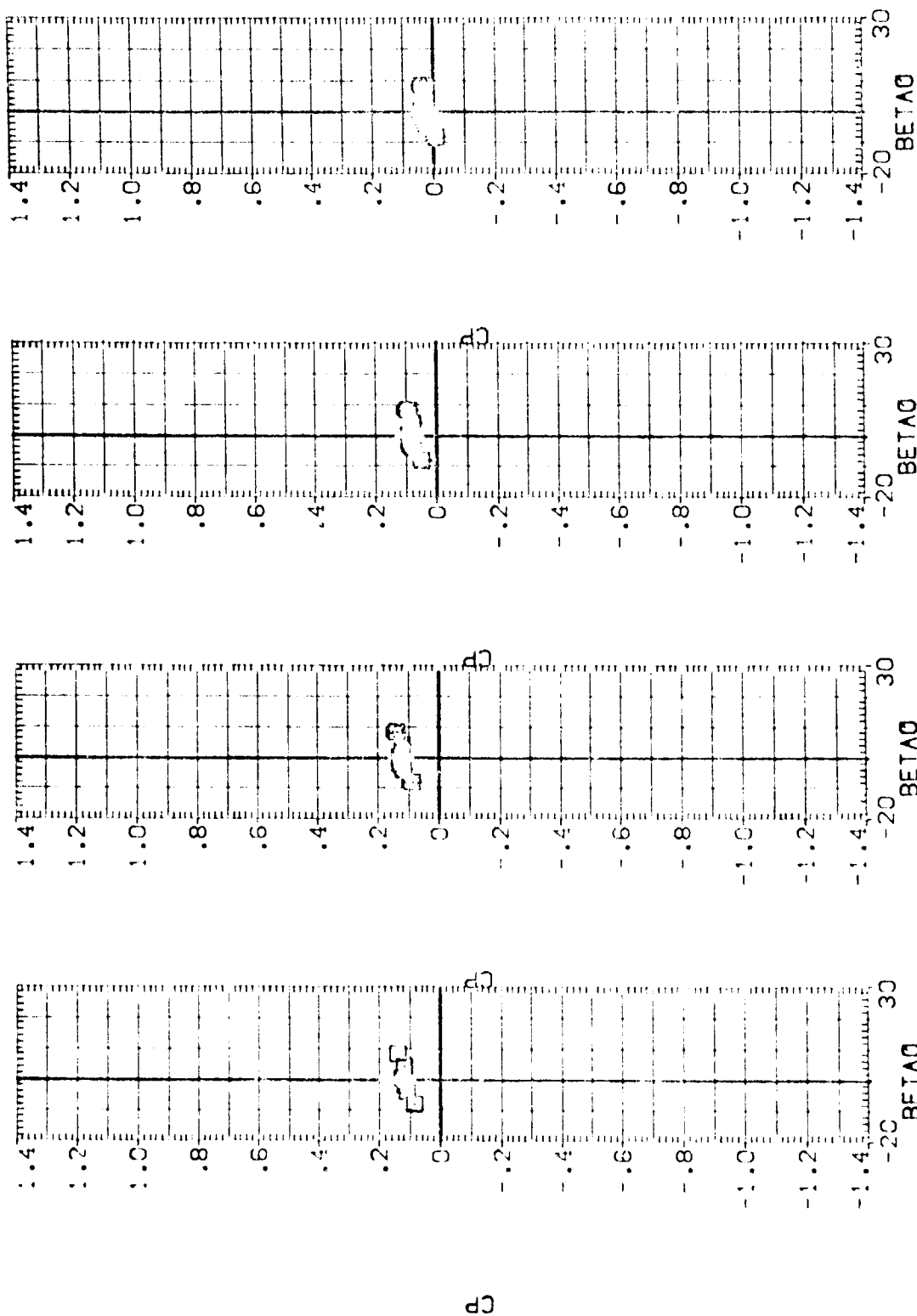


EXTERNAL TANK ATTACH POINTS PRESSURES

ARC1:-716 1A14 C1+T12+S12N25+AT10 ET ATTACH PTS.(RB1233)

SYMBOL	PHI	X/LT	ALPHA0	PARAMETRIC VALUES		
				1.250	ELEVON	.000
○	334.130	.916	7.910	.000	SPDRK	.000
◇	337.670	.921				
△	341.210	.927				
	344.750	.932				

MACH
RCDGR



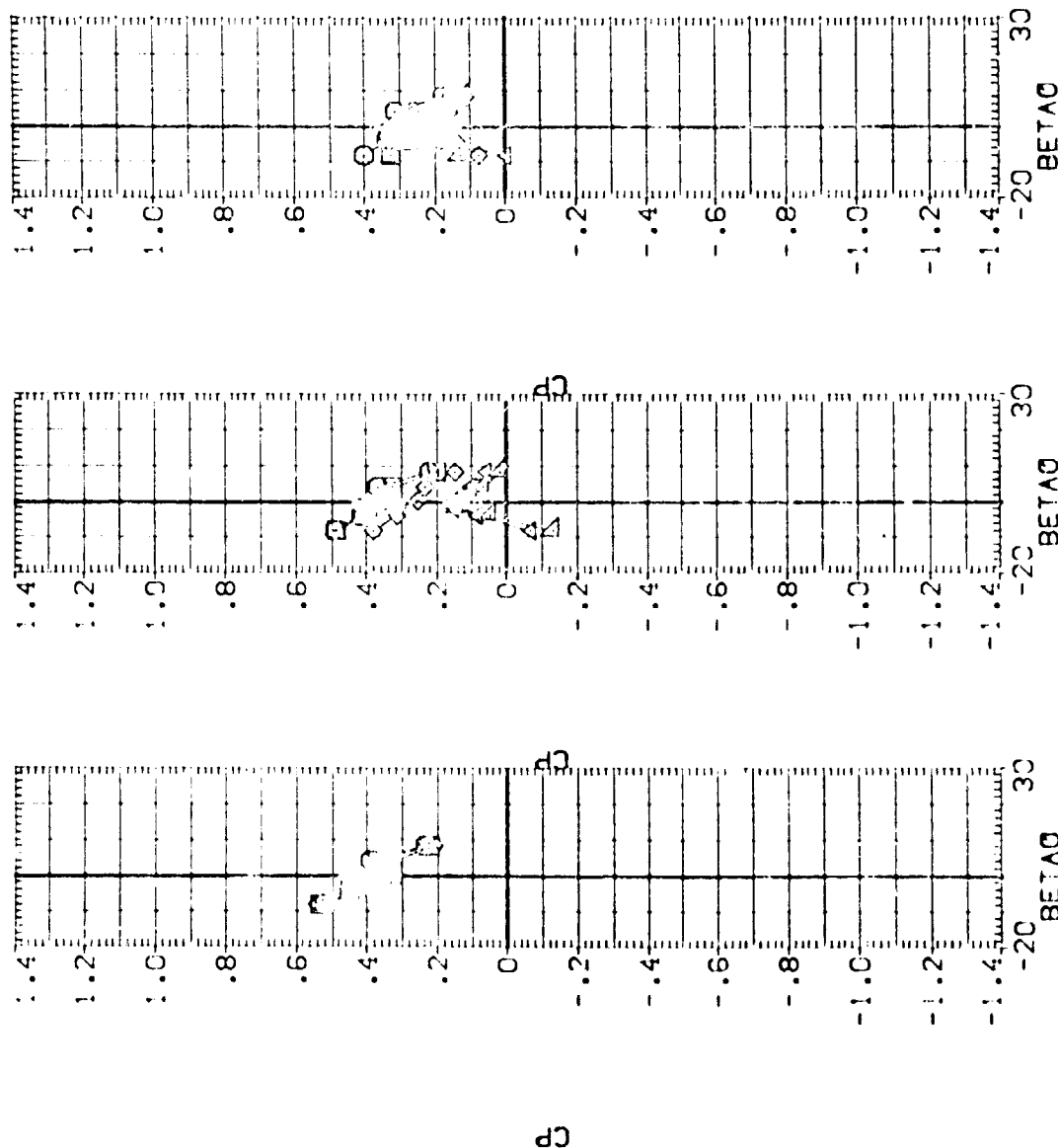
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SP033K
 .000

MACH
 0.000

SYMBOL PHI X/LT ALPHA0
 182.840 .413 7.910
 186.380 .419
 189.920 .424
 193.460
 197.000



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (R81233)

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOSRK
.000

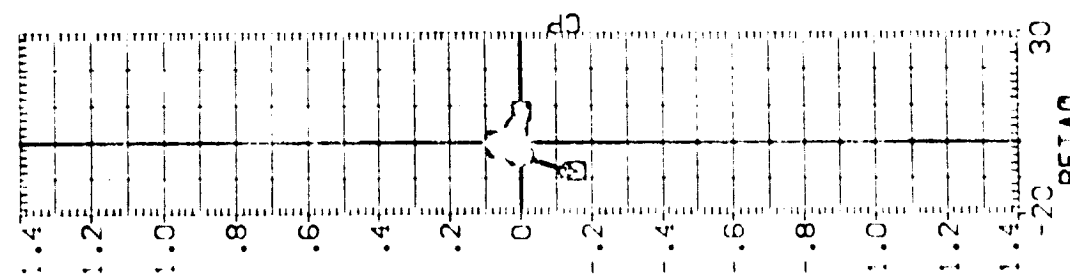
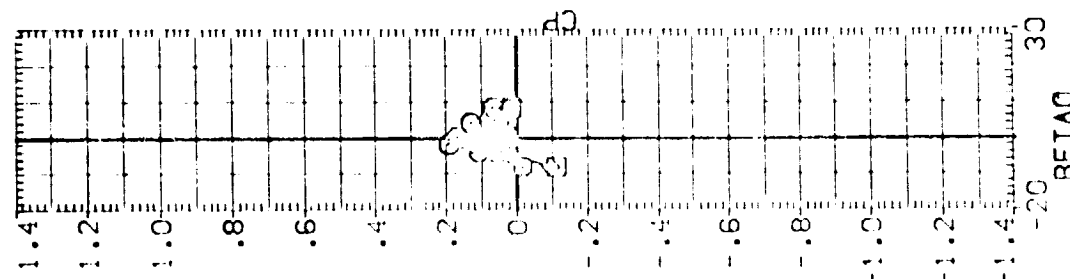
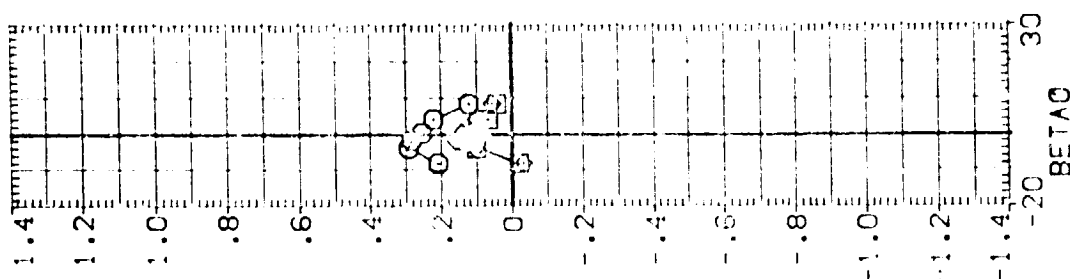
MACH
RUDDER

PHI
ALPHA0

X/LT
.413
.419
.424

200.540
204.080
207.620
222.840
226.380

SYMBOL
O () 4.1



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S:2N25+AT10 E ATTACH PTS. (RB1233)

PARAMETRIC VALUES
1.250 ELEVEN
.000 SPEED
.000

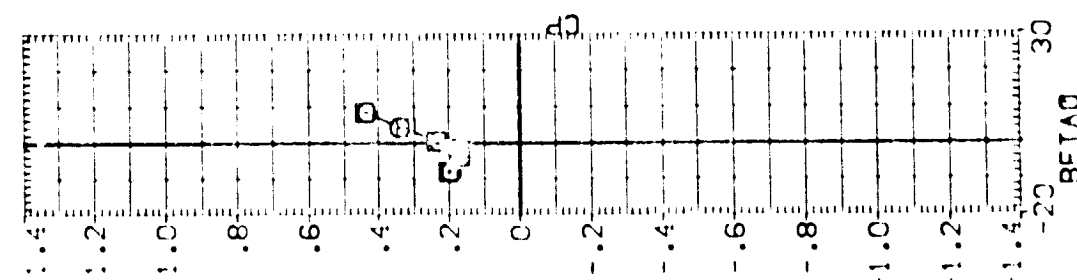
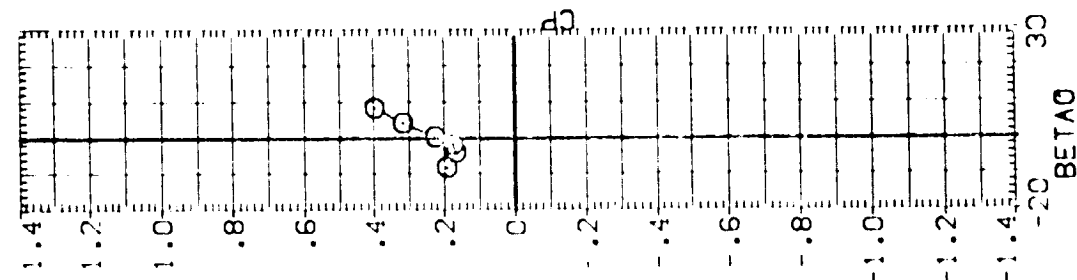
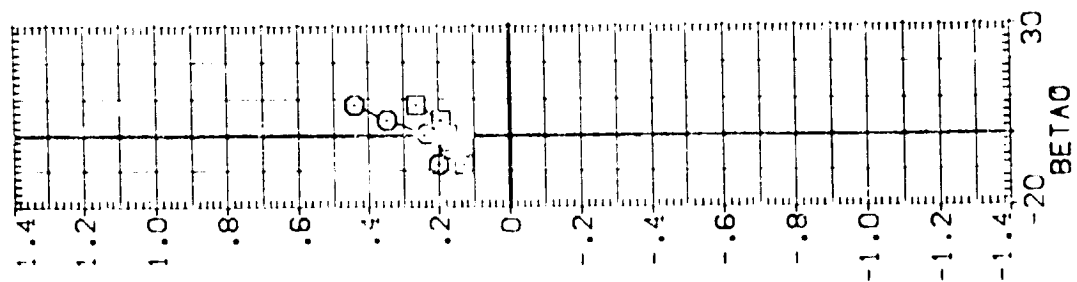
MACH
RUGER

ALPHA0
7.910

X/LT
.828
.834
.839

PAI
229.920
233.460
234.040
237.000
237.500

SYMBOL
O
□
◇
△



EXTERNAL TANK ATTACH POINTS PRESSURES

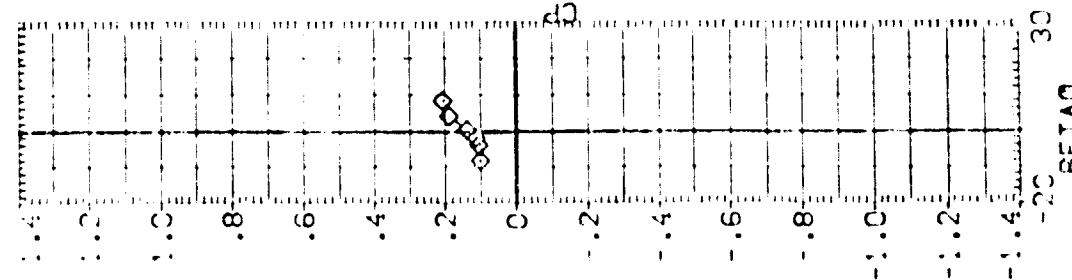
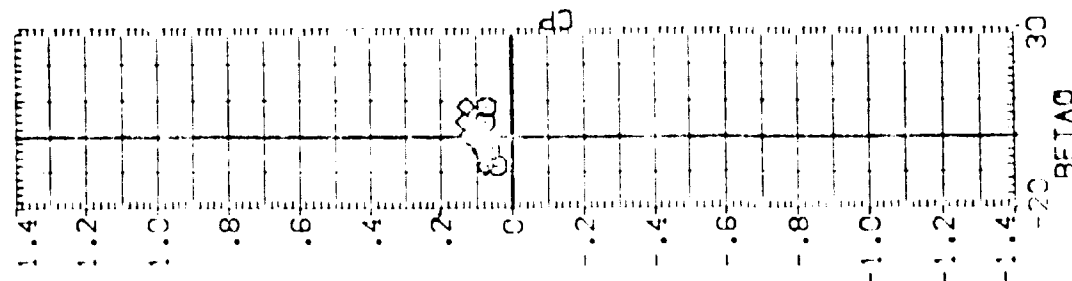
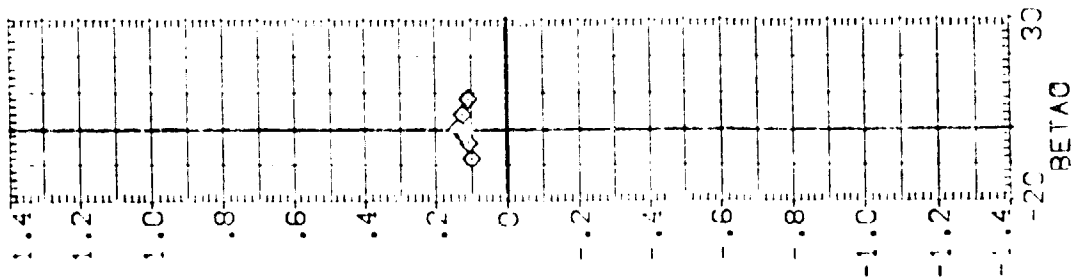
ARC11-716 1A14 01+T12+S12N25+AT10 ET ATTACH PTS. (RB1233)

PARAMETRIC VALUES
1.250 ELEVON
.000 SPOILER

MACH
RUCER

PHI X/L² ALPHA
240.540 .928 7.910
241.120 .934
244.000 .839
244.000
248.200

S.7801
0 0 0 0 0



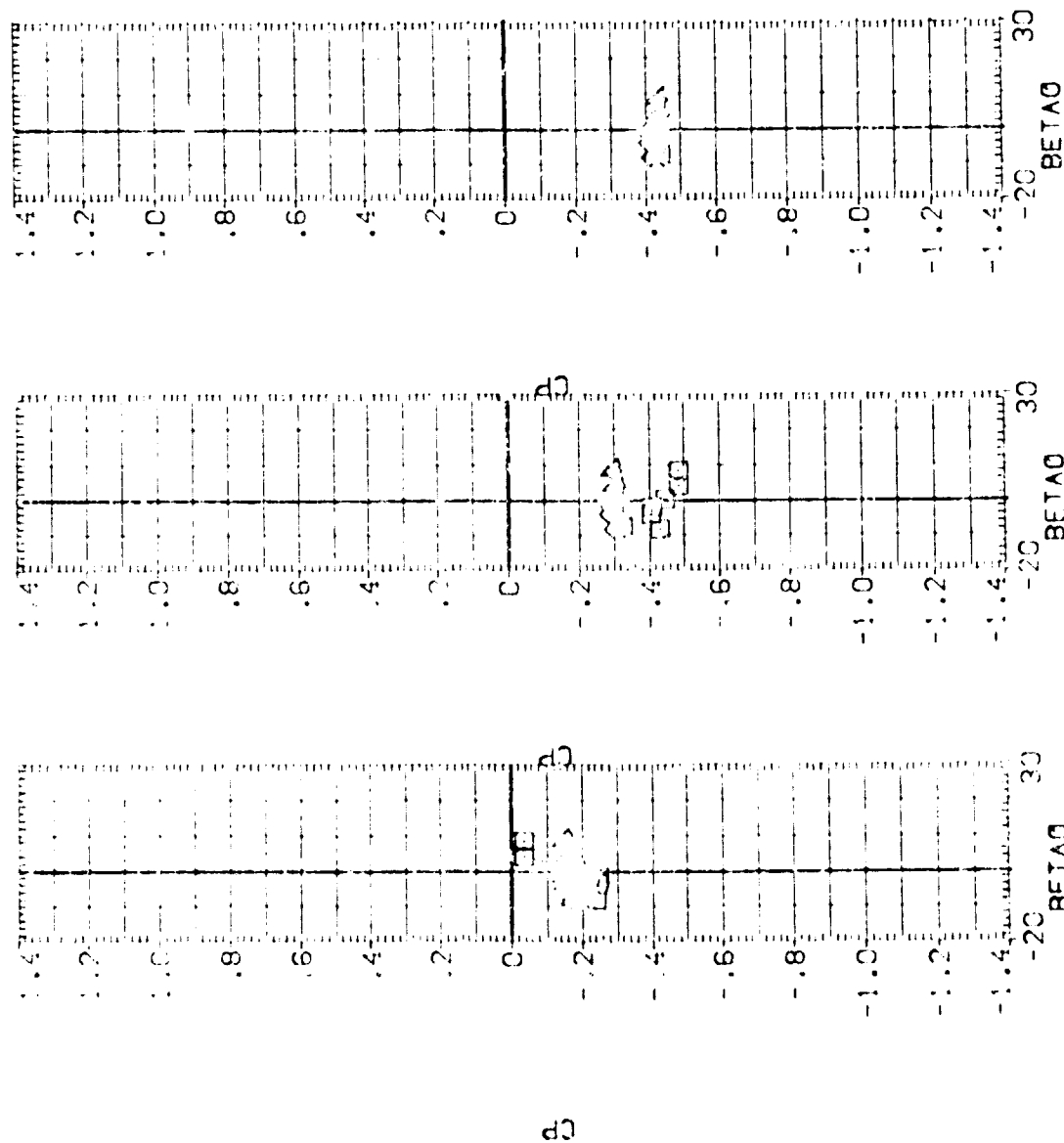
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11 215 1A14 017112+S:2N25+A110 ET ATTACH PTS. (RB:233)

PARAMETRIC VALUES
 1.2750 ELEVON
 .0000 SPEEDON
 .0000

MACH
 RUDDER

PARAMETRIC VALUES
 1.2750 ELEVON
 .0000 SPEEDON
 .0000



EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-715 IAI4 01+112+S12N25+AT10 01 ATTACH PTS. (RB1233)

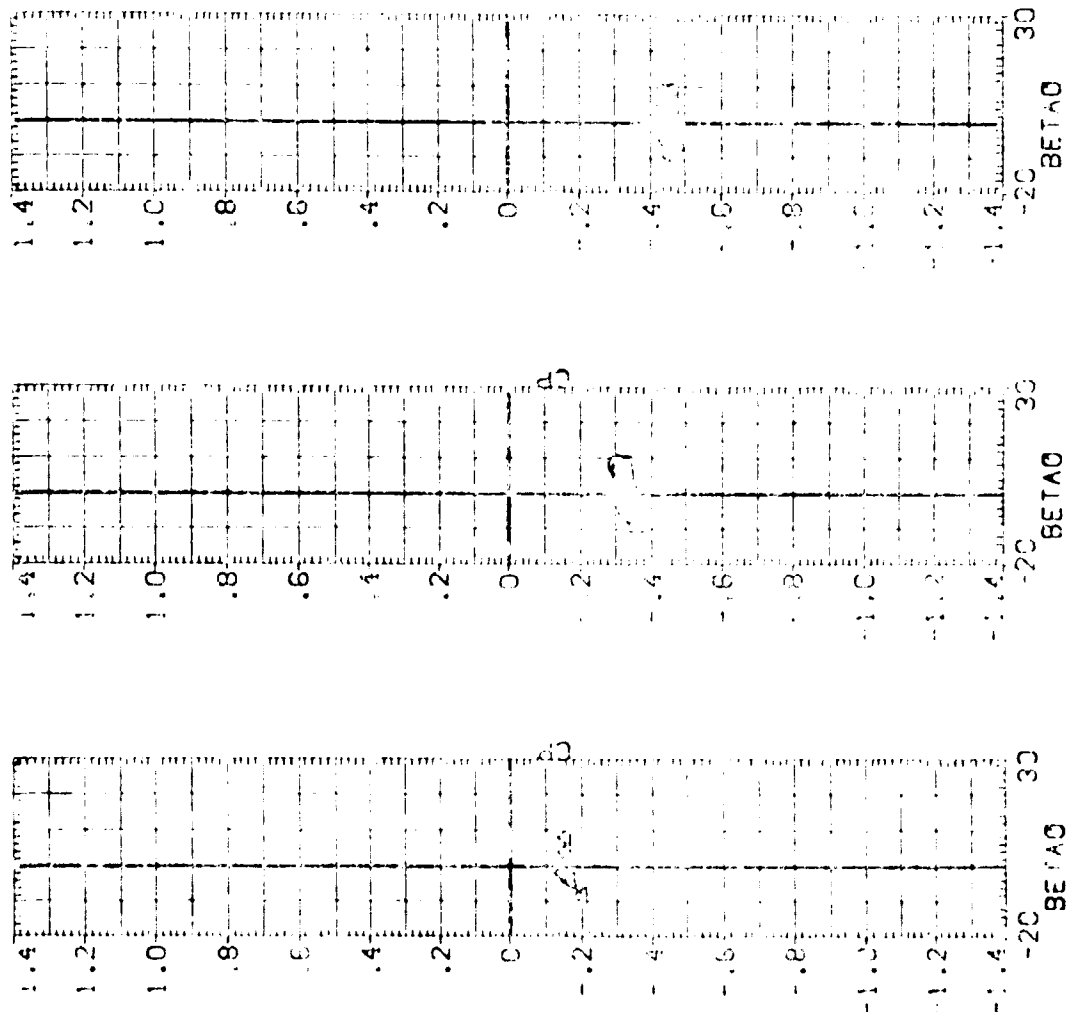
SYMBOL

□ ◇ △

RAI XLT ALPMS
334.130 .938 7.910
337.670 .943
341.210 .348
344.750

PARAMETRIC VALUES

1.250 ELEVEN
.000 SPARK
MAC
RUDDER



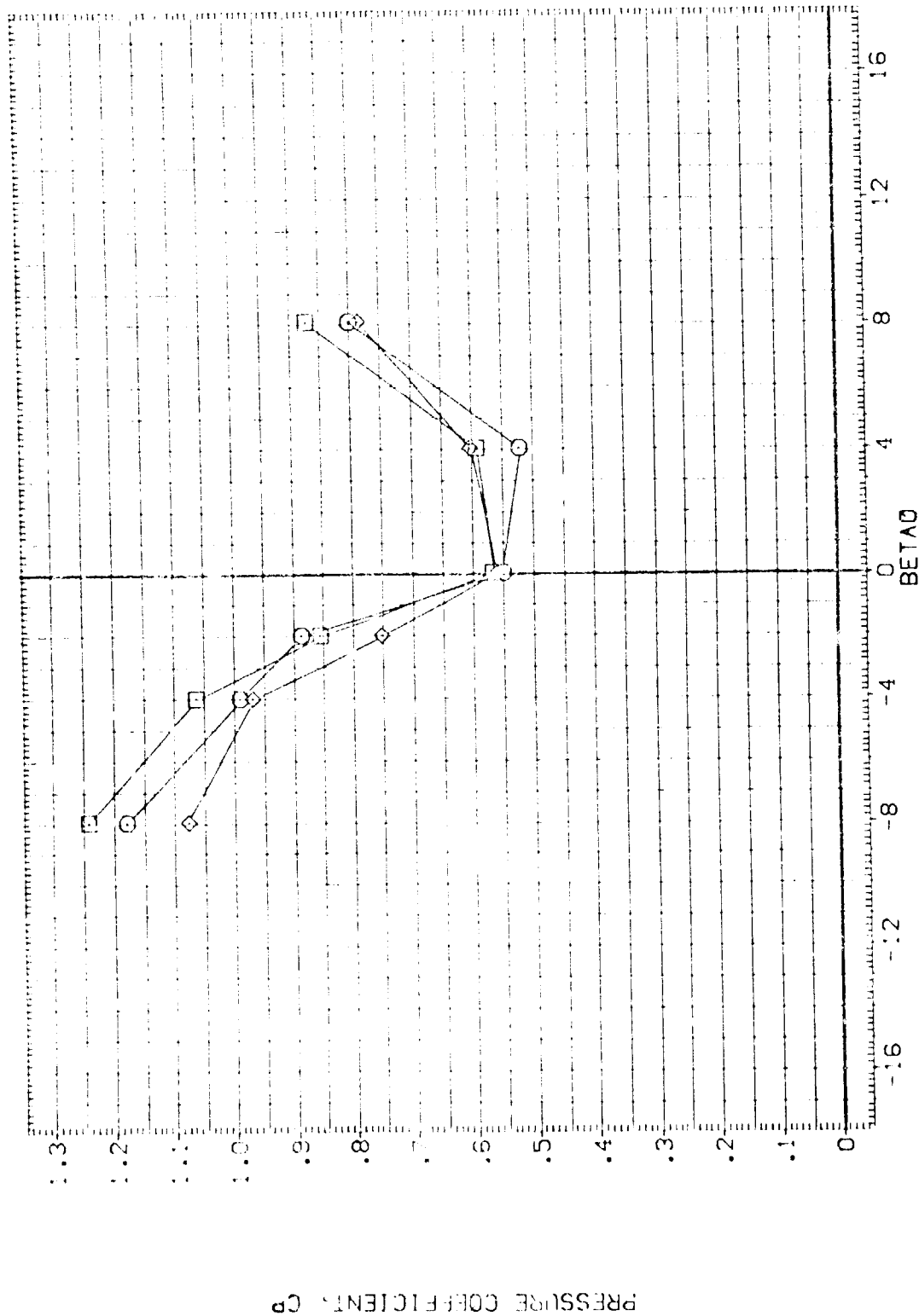
EXTERNAL TANK ATTACH POINTS PRESSURES

ARC11-716 1A14 01+112+S12N25+A110 ET BASE RAKE (RB1333)

PARAMETRIC VALUES
 MACH 1.250 ELEVON .000
 RUDDER .000

ALPHA 0
 -3.220

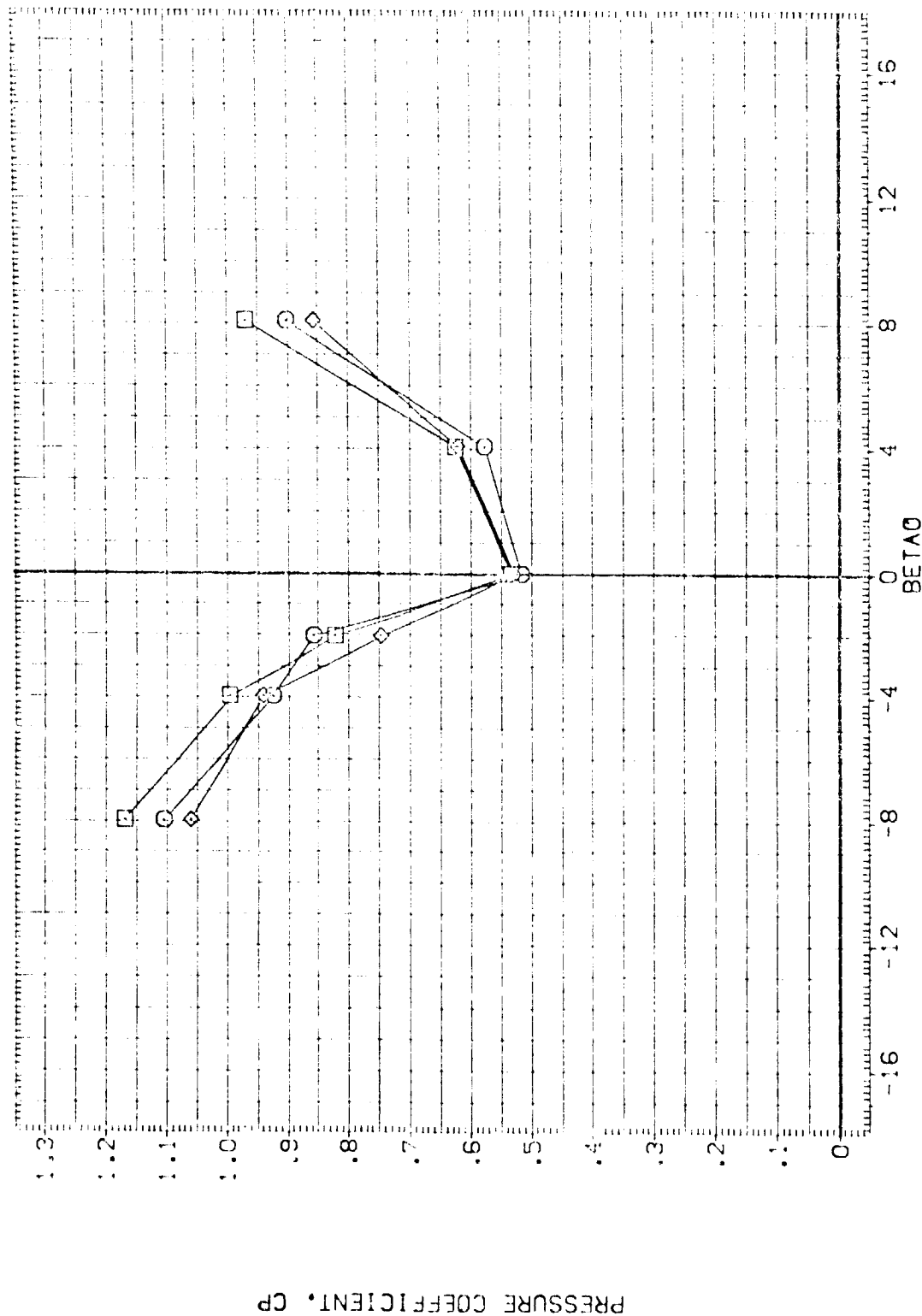
SYMBOL TAP NO PHI
 O 790.000 180.000
 X 786.000
 V 788.000
 W 787.000



EXTERNAL TANK BASE RAKE PRESSURES

ARC11-716 :A14 C:112+S12N25+AT10 ET BASE RAKE (RB1333)

SYMBOL	TAP NO	PHI	ALPHA	PARAMETRIC VALUES
○	790.000	180.000	-4.200	MACH 1.250 ELEVON .000
◇	789.000			RUDER .000 SPOILER .000
△	787.000			



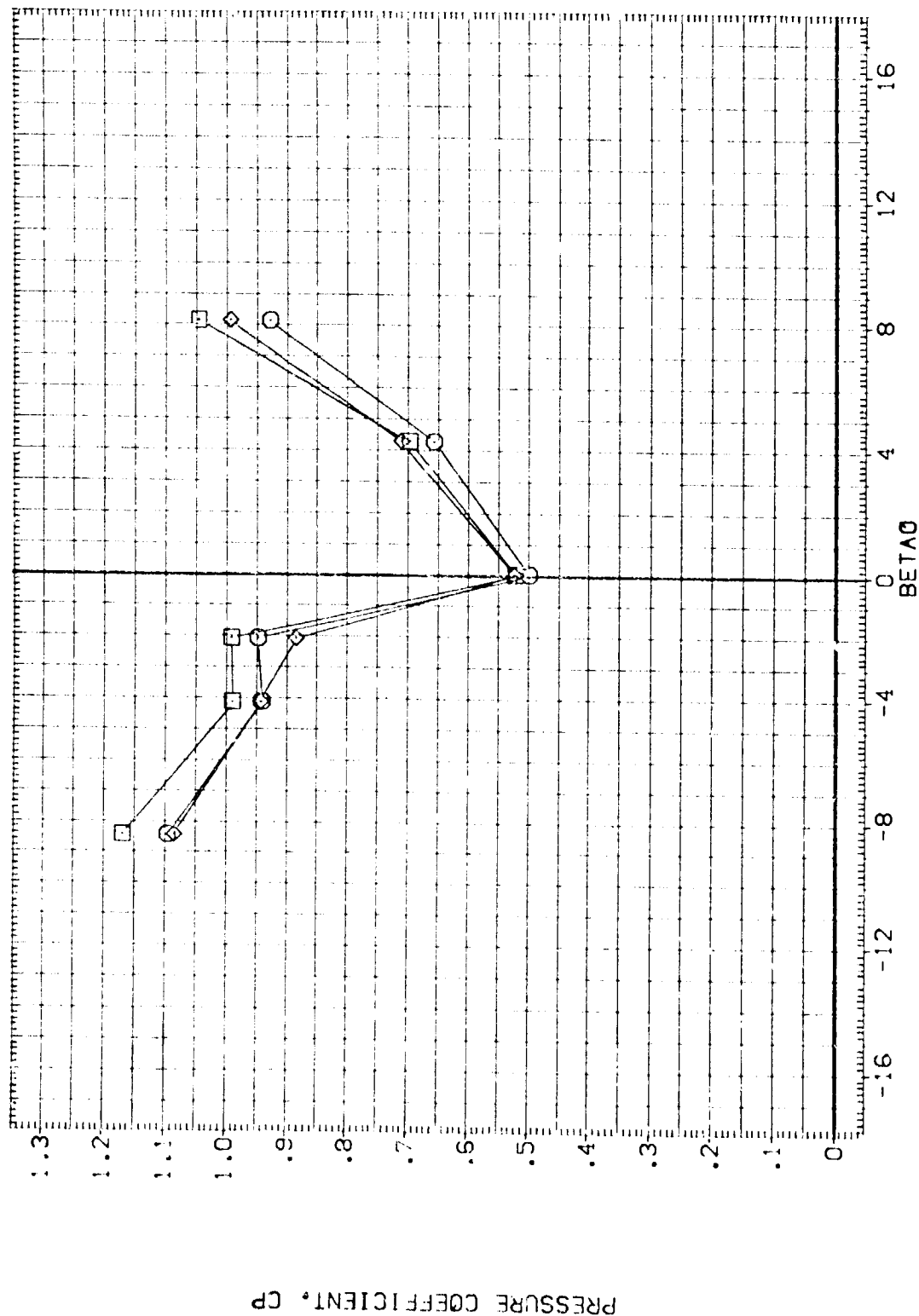
EXTERNAL TANK BASE RAKE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET BASE RAKE (RB1333J)

SYMBOL
 ○
 □
 ◇
 △

TAP NO
 790.000
 789.000
 788.000
 787.000

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPEEDRK .000



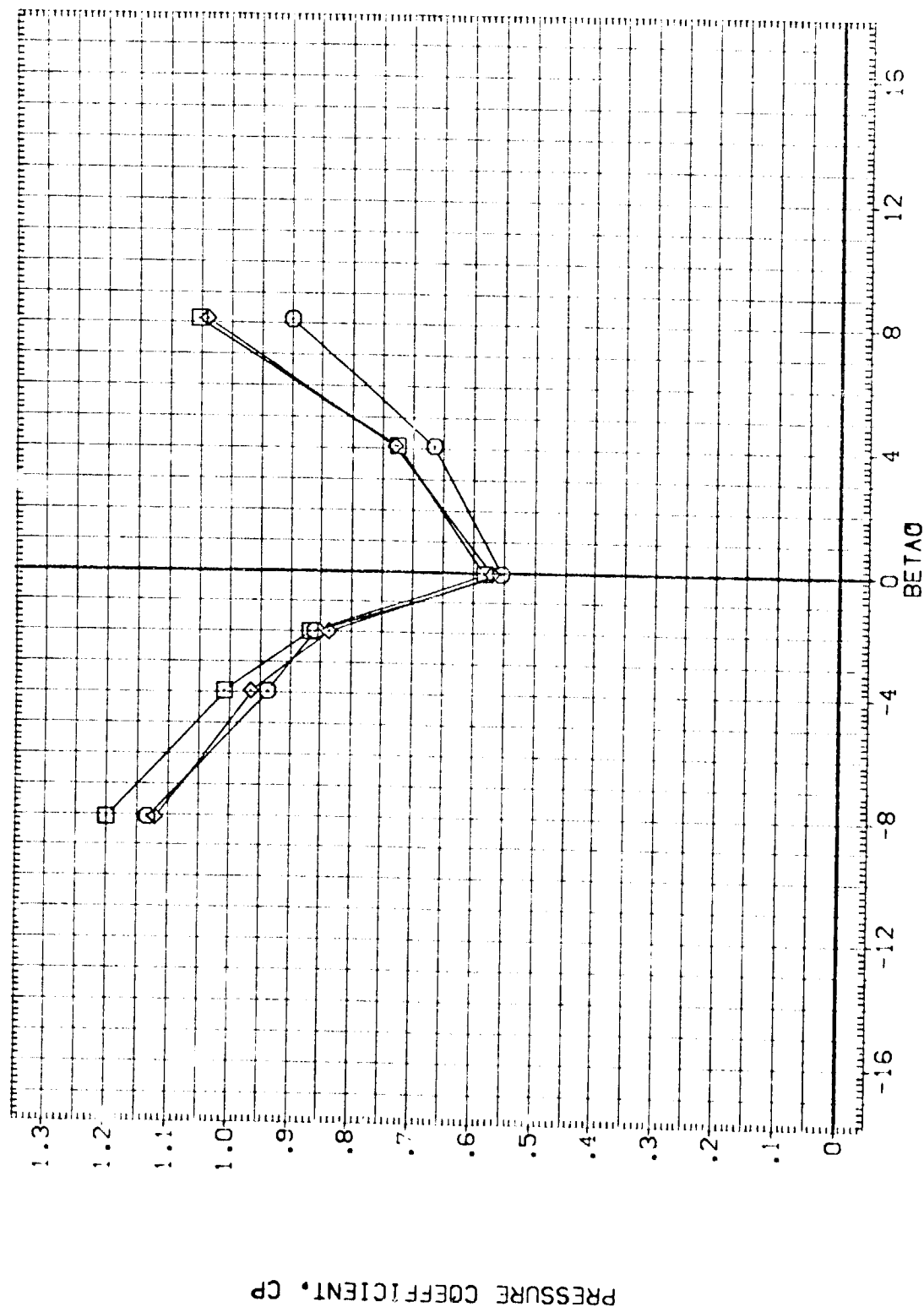
EXTERNAL TANK BASE RAKE PRESSURES

ARC11-716 IA14 01+T12+S12N25+A110 ET BASE RAKE (RB1333)

SYMBOL
 TAP NO
 790.000
 789.000
 788.000
 787.000

PHI
 180.000
 ALPHA0
 4.300

PARAMETRIC VALUES
 MACH 1.250
 RUDDER .000
 ELEVON .000
 SPDRK .000



EXTERNAL TANK BASE RAKE PRESSURES

ARC11-716 1A14 01+T12+S12N25+AT10 ET BASE RAKE (RB1333)

PARAMETRIC VALUES
 1.250 ELEVON
 .000 SPOBRK
 .000

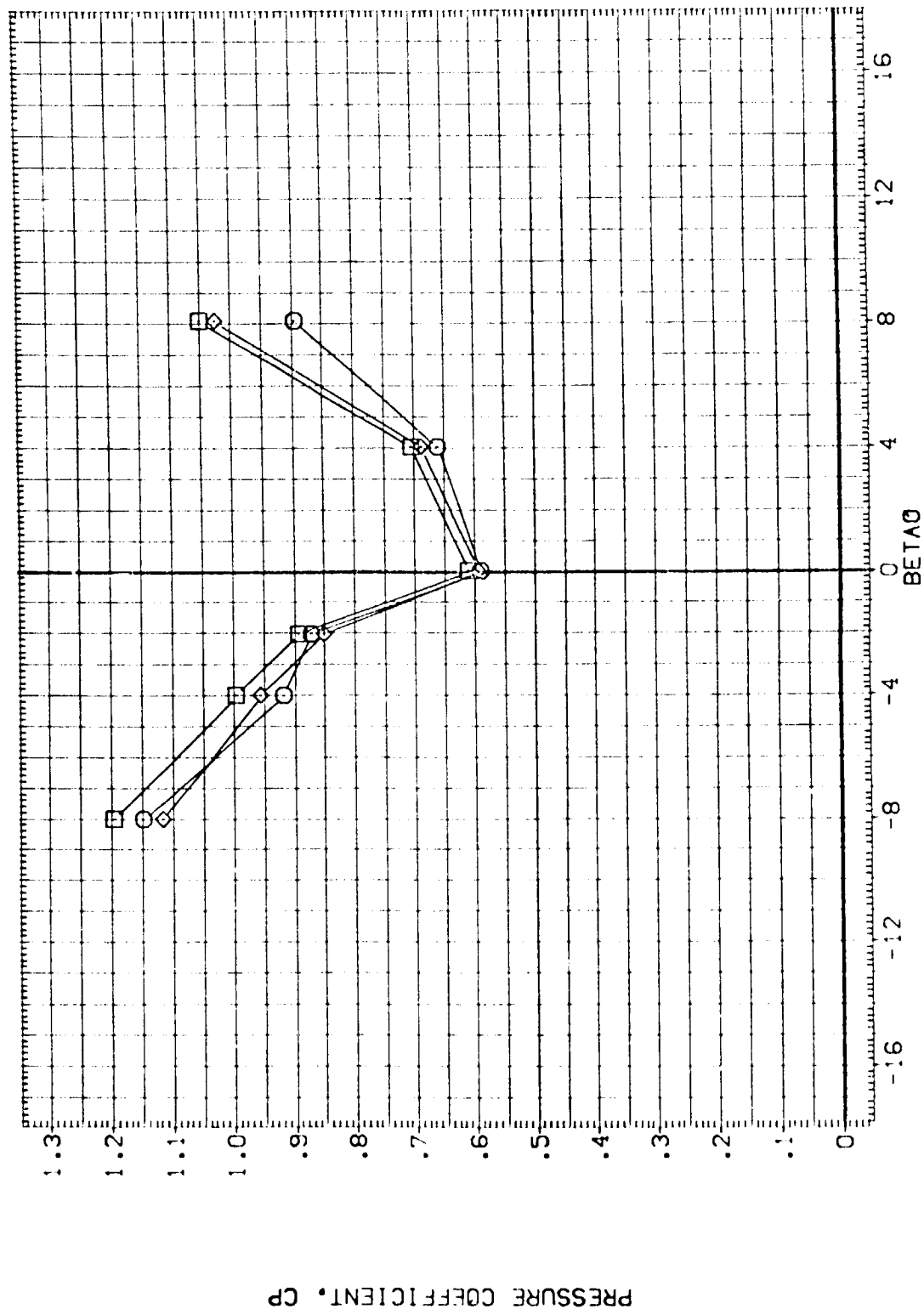
MACH
 RUDDER

A₁-P₁-A₀
 7.910

PHI
 180.000

TAP NO
 790.000
 789.000
 788.000
 787.000

SYMBOL
 □
 ◇
 ○



EXTERNAL TANK BASE RAKE PRESSURES